IBM 3728 Communication Control Matrix Switch

Support Processor Operations Guide

GA27-3644-0

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About This Guide

Introduction

This guide teaches you how to operate the support processor. The support processor controls and monitors a Matrix Switch network. With this guide you can learn how to use the support processor to control and monitor all Matrix Switch network operations.

One operation the support processor performs, memory dump, is not covered in this guide. Memory dump is a service feature provided by the support processor and is performed by the IBM Customer Engineer only.

Who Should Use This Guide

This guide should be used by:

- Matrix Switch network operators
- Matrix Switch network technical support personnel
- IBM service representatives
- IBM region designated specialists.

Related Publications

Before reading this book and attempting any of the operations it covers, you should be completely familiar with the *IBM 3728 Communication Control Matrix Switch Operations Guide*, GA27-3643.

If you plan on performing 3727 emulation, as described in Chapter 7, you should also be familiar with the *IBM 3725 Communication Controller Operating Guide*, GA33-0014.

The *IBM Personal Computer XT Guide to Operations* should be available to the support processor operator.

Parts of This Guide

This guide is divided into 13 chapters and six appendixes, as follows:

- **Chapter 1 - Introduction to the Support Processor** gives you an overview of the support processor operations.
- **Chapter 2 - Understanding the Screen Displays and Keyboard Control** describes general operating techniques that are applicable to all support processor operations.
- **Chapter 3 - Getting Started** describes how to turn on and prepare the support processor for operation.
- **Chapter 4 - Logging on, Logging off, and the Main Selection Panels** describes the procedure for beginning and ending support processor operations.
- **Chapter 5 - Direct FELSWCH Control** describes using the support processor to emulate a switch control console.
- **Chapter 6 - Creating and Editing Command Files: The Edit File Command** describes creating command files, stored sequences of switch control console commands.
- **Chapter 7 - 3727 Emulation** describes using the support processor to emulate a 3727 Operator Console.
- **Chapter 8 - Running Command Files: The Run Command** describes how to execute command files.
- **Chapter 9 - Triggering Command Files: The Trigger Command** describes how to execute command files automatically, in response to selected events.
- **Chapter 10 - Managing the Disk Files: The File Command** describes the support processor filing system and how to maintain the files.
- **Chapter 11 - Protection Features: The Protection Command** describes support processor protection features that control the support processor operations that are available to each user.
- **Chapter 12 - Setting Up Support Processor Configurations: The Node Command** describes setting parameters of the support processor.
- **Chapter 13 - General Help** describes how to display screens which provide help to the support processor user.

- **Appendix A - System Messages** provides a list of system messages and their meaning.
- **Appendix B - Edit File Error Messages** provides a list of edit file error messages and their meaning.
- **Appendix C - Complete Commands and Direct Screen Access IDs** provides a list of all the complete commands you can enter directly into the command area and execute, and a list of panel identifications that are used to directly access a panel.
- **Appendix D - Command File Examples: Entering 3727 Emulation** provides command file examples for entering 3727 emulation.
- **Appendix E - Monitoring 3725 Messages: An Application of the Trigger Command** explains how to set up your support processor to constantly monitor messages produced by all the 3725s.
- **Appendix F - Helpful Command Files** contains a set of command files which allow you to set date, time, event report destination, select switch or support processor nodes, select passwords, name ports, and connect groups or ports.

How to Use This Guide

Before performing any operations described in this guide, you should read Chapters 1 and 2. Chapters 1 and 2 provide an introduction to the support processor and support processor operations; Chapters 1 and 2 do not cover specific operating procedures. Specific operating procedures are provided in Chapters 3 through 13.

The first procedures you should perform are in Chapter 3. Chapter 3 helps you get started on your support processor; you will probably only need to use Chapter 3 once: the first time you turn on the support processor. Chapter 3 covers (often in one or two steps) procedures that are fully outlined and detailed in Chapters 4 through 12. After you are finished with Chapter 3, you will be able to go into Chapters 4 through 13 and learn the operations that are part of the support processor daily operations.

Terminology Notes

The terms unit, switch, network, node, and local and remote support processor, which are used frequently in this guide, are defined as follows:

- A **unit** is a single cabinet of a Matrix Switch.
- A **switch** can consist of a base unit or of a base unit and up to 15 extension units connected together in one location. Consoles and printers connect to the switch and they control and monitor switch operation.
- A **network** is a group of Matrix Switches, in the same or in different locations, connected together by communication links. When this guide refers to a Matrix Switch network, it is referring to a collection of Matrix Switches connected by communication links. When this guide refers to a telecommunication network, it is referring to the equipment (such as modems and communication controllers) connected to the Matrix Switch network.
- A **node** is a unique addressable location in a Matrix Switch network. In a Matrix Switch network, addresses are assigned to each Matrix Switch and to each support processor (which controls the Matrix Switch). A Matrix Switch network can contain up to 61 nodes.

The 61 nodes can include 61 Matrix Switches or a combination of Matrix Switches and support processors. For example, a Matrix Switch network could include 66 Matrix Switches and six support processors.

- A **local support processor** is the support processor at which you are working. The name and number of the local support processor is identified in the support processor panel headers as LOCAL.
- A **remote support processor** is any support processor in the Matrix Switch network other than the local support processor.

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Chapter 1

Introduction to the Support Processor

This chapter discusses the relationship of the support processor to the Matrix Switch network and gives a hardware overview of the support processor. It also briefly describes each operation the support processor can perform.

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Capabilities

The support processor is an IBM Personal Computer XT that gives you automatic control of a Matrix Switch network. The support processor has all the control abilities of a switch control console, plus a wide range of additional abilities that ease network control. The support processor:

- Stores on a disk or diskette sequences of switch control console commands. The stored commands can be executed:

  On a time schedule

  In response to events in the network

  Upon user request.

This capability allows the support processor to automatically perform functions that would otherwise have to be performed by a switch control console operator.

- Performs all the functions the switch control console performs
- Emulates a 3727 Operators Console and controls a 3725 Communication Controller
- Produces, sends, receives, and stores system messages
- Transfers files between its disk and a diskette
- Accesses its own disk files or the disk files of a remote support processor
- Prevents users from performing unauthorized operations
- Provides users with help.

Available for each support processor operation is a sequence of panels that lead you through each step of the procedure. You enter responses to the panels on the support processor keyboard. As each response is made, a new panel is displayed that prompts you to perform the next step of the procedure. This process continues until the procedure is complete. The experienced support processor operator can enter complete commands directly, and is not forced to use the prompting panels.

Relationship To The Matrix Switch Network

The support processor can replace or be used in addition to switch control consoles in the Matrix Switch network. One or more support processors can be used, depending on the requirements of your network. The support processor is considered another node on your network. Just as a Matrix Switch has a node address, each support processor has a node address.

Hardware Overview

The support processor is an IBM Personal Computer XT with:

- A keyboard
- A color CRT display
- A color/graphics display adapter
- A 10-megabyte fixed disk drive
- A fixed disk drive adapter
- A 5-1/4 inch diskette drive
- A diskette drive adapter
- A parallel printer adapter
- Two asynchronous communication adapters.

In ordinary operation, only the fixed disk is used. The diskette drive gives you a way to back up and restore files, and a way to distribute program revisions.

The parallel printer adapter is used to connect the support processor printer, an IBM 5182 Personal Computer Color Printer, to the support processor. The printer is optional and can be used for logging commands and system messages, and for printing panels.

The two asynchronous communication adapters (ACAs), a primary and a secondary, each serve a special purpose:

- The **primary ACA** is connected to a network control interface port on a Matrix Switch. It provides a control interface between the support processor and the Matrix Switch network.
- The **secondary ACA** is used to connect the support processor to an IBM 3725 Communication Controller. This is usually done through a Matrix Switch. This connection is used only for 3727 emulation.

Support Processor Operations

The following sections briefly describe each operation you can perform on the support processor.

Command Files

The ability to create, store, and execute command files gives the support processor its major advantage over the switch control console. A command file is a stored sequence of the switch control console

commands. All switch control console commands are allowed in command files. When a command file is executed, each of its commands execute automatically, one at a time. Through command file execution, the support processor can perform any operation a switch control console can perform. Once a command file is created (Chapter 6), you can execute in a couple of steps the same operation that a switch control console operator would have to execute in many steps, one command at a time.

You can execute command files in a variety of ways. Command files can be executed with:

- The run command (Chapter 8), which executes command files whenever you specify a command file and request that it be executed.
- The trigger command (Chapter 9), which executes command files on a schedule or in response to events in the Matrix Switch network. Command files can be set up to be triggered indefinitely. Once the triggering conditions are set up, and a command file is specified, the command file triggers on its own, without any action required from the operator.

  Other than switch control console commands, you can include in command files pseudo commands. Pseudo commands give command files a wider range of functions than would be afforded by a sequence of only switch control console commands.

Protection Features

You can set up the support processor to prevent selected users from performing selected operations. Each support processor user is assigned a unique user name and an associated user password. Without a current user name and password, it is not even possible for a user to log on.

Each valid user is also assigned a unique list of operations that the user can perform. A user can perform as many or as few operations as determined by whoever has the authority to assign user access rights. User access rights can be changed and user names can be added and deleted.

Switch Control Console Mode

The support processor can be set up to act like a switch control console (Chapter 5). In the switch control console mode, the support processor controls and monitors a Matrix Switch network in exactly the same way a switch control console controls a Matrix Switch network. The support processor keyboard control and panels mimic switch control console's keyboard control and panels.

3727 Operators Console Emulation

The support processor can be set up to emulate a 3727 Operators Console (Chapter 7). As a 3727 emulator, the support processor can control several local or remote 3725 Communication Controllers.

Disk Filing

The support processor can save on fixed disk copies of log, report, command, program, and system files (Chapter 10). The support processor can delete files, display the file contents, and transfer files between disk and diskette. In Matrix Switch network operations, the support processor can access its own disk files or the disk files of a remote support processor.

Support Processor Configuration

The support processor operator can change the support processor primary and secondary asynchronous communication adapter link speeds and the support processor node number (Chapter 12).

The operator can also set a local or remote support processor's:

- Name
- Date
- Time
- Alarm repeat timer
- Event report destination.

Help

The support processor provides a variety of help panels (Chapter 13). The help panels provide information on every operation performed by the support processor.

Printer Operation

The support processor has a parallel port that may be used to connect the support processor printer, an IBM 5182 Personal Computer Color Printer. The support processor printer can print out:

- Switch control console commands entered from the support processor

- Event reports directed to the support processor from local node or other network nodes
- Event reports produced by the support processor
- Switch control console and support processor command errors
- Support processor panels
- Command files executed by the support processor.

Printer operation is covered in the Personal Computer XT Guide to Operations.

> **Note:** Where there is a choice for directing information to the printer or screen (for example, printing or displaying a file), the choice is given to you as part of menu selections. You also have a choice to print out any panel displayed on the screen. To do this, press and hold the shift key  and then press the PrtSc key.

Chapter 2

Understanding the Panels and Keyboard Control

This chapter introduces the control modes and describes the panels and keyboard operations that are unique to the support processor. These panels and operations apply only to the system mode, user logon and logoff, and user help requests.

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Control Modes

Two support processor control modes, 3727 emulation and direct FELSWCH control, imitate other control systems. The panels and keyboard operations for these modes are the same as the panels and keyboard operations for the equipment they imitate.

Panel/Keyboard Overview

All of the support processor operations are supported by information displayed in panels on the screen. As you advance through a procedure, a unique panel is available in each step. The panels typically provide command options or request the entry of a parameter. The selections and decisions you make in response to each panel determine which panel will be displayed next. You type and enter responses to the panels on the keyboard. With the keyboard, you can:

- Select an option from a panel's menu
- Enter a parameter requested by a panel
- Enter an entire command if you know the correct form
- Perform a special program function by pressing a special function key
- Directly access panels
- Acknowledge command error messages and event reports.

The Panels

Panel Format

With the exception of the panels displayed in the 3727 emulation and direct FELSWCH control modes, all of the panels displayed by the support processor are shown in Chapters 2 through 13. Each panel contains:

- A header
- A menu or selection area
- A function key area
- A system message area.

Each of these is described in the following sections.

Header

The header is the top three lines of every panel. The header informs you about the current state of the support processor and the Matrix Switch network. Panel header format is shown in Figure 2-1.

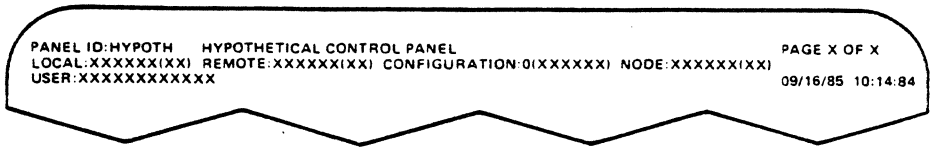


Figure 2-1. Panel Header Format

The fields of the header are:

- The **PANEL ID** is a unique mnemonic assigned to each panel. The panel ID is often an abbreviation of the panel title, or in some way represents the function of the panel. The panel ID of the sample header is **HYPOTH.**

- The panel's title is centered on the top line of the header. The panel's title briefly describes the purpose of the panel.

- **PAGE X OF X** is the panel location information. It tells you which page of the panel are currently displayed. The panel location field is blank if a panel is one page.

- **LOCAL** provides the name and node number of the support processor at which you are working.

- **REMOTE** provides the name and number of the support processor from which the local support processor accesses fixed-disk files. Every support processor is able to access the files of its own fixed disk or the fixed disk of a remote support processor. You select the particular support processor from which you want to access fixed disk files during logon. If you are using a support processor to access its own fixed-disk files, the LOCAL and REMOTE identifiers indicate the same name and number. Before you log on, the area for the REMOTE name and number is blank.

- **CONFIGURATION** tells which configuration of the selected NODE is currently affected by support processor commands and if that configuration is active or offline. The CONFIGURATION field displays 0, 1, 2, or N followed by (ACTIVE) or (OFFLINE).

- **NODE** provides the name and number of the switch in the Matrix Switch network currently affected by support processor commands (the last switch selected by the switch control console select command).

- **USER** identifies the name of the currently logged on user. The USER namefield is blank if no user is logged on.

- Time and date are displayed at all times. The support processor updates the time and date display once a second and when it is changed through software control.

Menu or Selection Area
The menu or selection area contains a list of command options, a request for a parameter, or a list of information, and a command prompt (= = = >). All panels that request a response tell you what to do. The command prompt (= = = >) marks the spot where you can enter a command or an option.

Function Key Area
Function keys F1, F3 through F8, and F10 each provide a special service. Not all function keys are usable in all panels. The function key area lists the available program function keys. Figure 2-2 shows the function key area of a panel in which all the function keys are available.

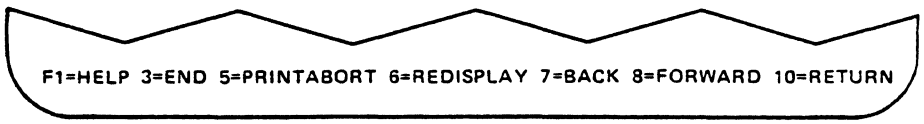


Figure 2-2. Function Key Area

System Message Area
Two lines at the bottom of the panel are reserved for system messages. There are two types of system messages: **command error messages and event reports.** System messages each take up one line. A maximum of two command error messages, two event reports, or one of each can be displayed at one time. As each new system message is received, it is displayed in the message area if space is available. If there is no space, it is held for display in a queue. Once displayed, system messages stay on the screen until they are acknowledged, which is done through keyboard entries (see "Acknowledging Messages" at the end of this chapter).

All system messages are explained in Appendix A. The next two sections describe the display and printout format of the system messages.

Command Error Messages
Command error messages result from errors in support processor commands (such as trigger or run commands) and from errors in switch control console commands (such as select or edit commands). A command error can occur because of an error in command syntax or because the operator attempts a procedure that is not possible or not allowed. Because command error messages are of immediate and temporary use to the operator:

- Command error messages cannot be sent to other nodes of the Matrix Switch network (unlike event reports). Likewise, it is not possible for the support processor to display a command error message that occurs in another Matrix Switch node.

- Command error messages take precedence over event reports for display space; the support processor ensures that all command error messages are displayed before displaying event reports.

  Command error messages are always displayed on the screen. A command error is displayed on the screen in the format

  nnn text of message

  where ***nnn*** is the command error number; and ***text of message*** is the message itself.

  Command error messages are printed in the format

  hh:mm:ss Cnnn XXXX ERROR ***nnn text of message***

  where ***hh:mm:ss*** is the time the message occurred; ***Cnnn*** is the number of the command that caused the error; ***XXXX*** is SRUN, BRUN, or TRUN, indicating if the command that caused the error was screen, batch, or trigger run; ***nnn*** is the command error number; and ***text of message*** is the message itself.

Event Report

Event reports are issued to tell the operator of an occurrence in the support processor or in other nodes of the Matrix Switch network. The support processor can display event reports it itself produces, send event reports to other nodes of the network, and receive and display event reports from other nodes of the network.

Event reports are considered low-priority system messages; they are selected for display only after command error messages (high-priority messages) have been displayed and acknowledged. All event reports, those produced by the support processor and those received by the support processor from other nodes, are displayed and printed out. Event reports are displayed and printed out in the format

hh:mm:ss Ennn S = swchname(nnn) nn text of message

where ***hh:mm:ss*** is the time the event occurred; ***Ennn*** is the sequence number of the event report; ***S = swchame(nnn)*** indicates which node produced the event report; ***nn*** is the event report number; and ***text of message*** is the message itself.

Color Coding

The panels are displayed in different colors.

- **Red** is used to signal a severe error condition message that usually requires some quick action on the part of the operator.
- **White** is used for emphasis. Any entry on the screen, such as a parameter value or a command input, is displayed in white. White is also used to highlight information such as the panel titles and selection options.
- **Green** is used for information messages.
- **Cyan** is used for normal emphasis of information written on the screen.
- **Grey** is used for de-emphasis of output data.

Keyboard Control

The Keyboard

The support processor keyboard is shown in Figure 2-3.

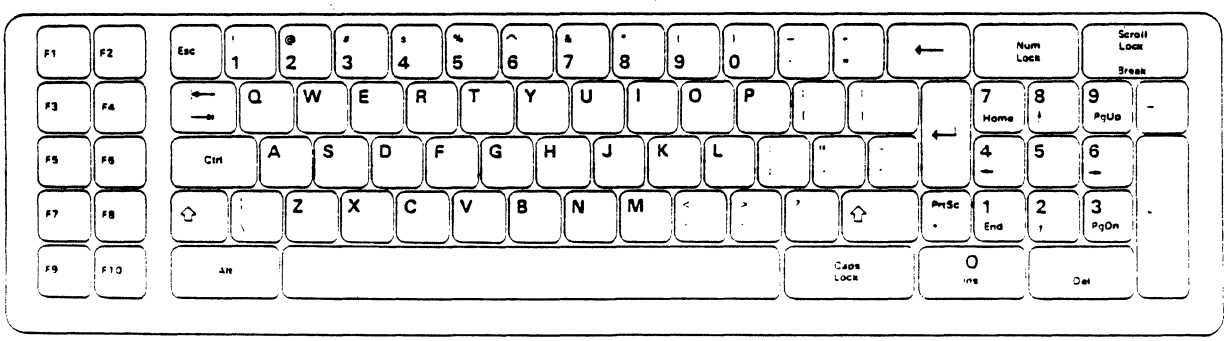


Figure 2-3. The Support Processor Keyboard

The keys are grouped into three different types:

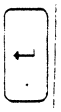
- Character keys (basic keyboard)
- General function keys
- Special function keys.

Some keys provide two functions. The two functions are shown on the upper and lower parts of the keyface. As on a typewriter, the shift key



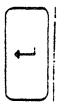
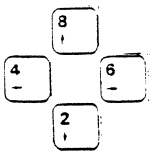
controls whether the upper or lower keyface marking is used when a two-function key is pressed.

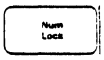
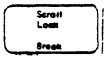
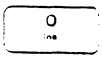
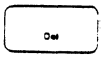
Character Keys
The character keys consist of alphabetic keys, numeric keys, punctuation-mark keys, the space bar, and the backspace key .
Use these keys to make entries onto the panels. Whenever you press one of these keys, an entry is displayed on the screen above the cursor and the cursor moves one space to the right. When the cursor reaches the right side of the screen, it automatically moves to the left side of the following row.

Do not use the Enter key  for cursor control.

Note: A space is considered a character. Do not use the space bar or the backspace key  for cursor control.

General Function Keys
The general function keys perform the same function that these keys perform in most keyboard/CRT systems. Each performs the same function for all panels. The purpose of each key is as follows:

Name and Picture of Key	Purpose
Enter key 	• Enters the information you typed on a panel. Do not use this key for cursor control. • Acknowledges messages.
Tab key 	Moves the cursor to the first space of the next area on the panel where an entry is possible. The cursor moves from left to right, and from top to bottom. When the cursor is in the command area (the last entry area on a panel), pressing the tap key causes the cursor to move to its first position on the panel.
Cursor control keys 	Moves the cursor one space in the direction indicated by the arrow. When held pressed, the cursor control keys repeatedly move the cursor. These keys only work when you are creating or editing a command file (Chapter 6).
Home key 	Moves the cursor to the first character position of the command file. This key only works when you are creating or editing a command file (Chapter 6).
Page Up key 	• Scrolls display to the preceding page of a panel. • Does not exit the panel. • Same function as function key F7.

Name and Picture of Key	Purpose
Page Down key 	• Scrolls to the next page of a panel. If there is no next page, the first page of the panel appears. • Does not exit the panel. • Same function as function key F8.
Control and Escape keys 	Use them together to exit 3727 emulation and direct switch control console modes. To use them, hold the ctrl key pressed and then press the Esc key.
Number Lock key 	Not used
Scroll Lock key 	Temporarily halts a command file screen run and freezes the scrolling display; when pressed a second time, re-starts command file run and display scrolling.
End key 	Moves the cursor to the end of the command line. Use it to complete a partial command only.
Print Screen key 	Prints current panel.
Insert key 	Enters insert mode in file edit session.
Delete key 	Enters delete mode in afile edit session.

Special Function Keys
Function keys F1, F3, F5 through F8, and F10 each perform the same function whenever they are available for use. Availability of the function keys changes from panel to panel. The function key area of each panel indicates which key can be used for the panel. The purposes of each function key is as follows:

Name and Picture of Key	Purpose
F1 (HELP) key 	• Displays the Help Topic Selection panel (Figure 13-1). • Acknowledges messages. • Is available on every panel, except the User Logon panel (Figure 4-2).
F2 key 	No general function.
F3 (END) key 	• Exits a panel and displays the preceding panel. • Discards entries you just made on the panel you are exiting. • Acknowledges messages.
F4 key 	No general function.
F5 (PRINTABORT) key 	Aborts report or file that is currently printing.
F6 (REDISPLAY) key 	• Redisplays a panel as it first appeared. • Discards the entries on a redisplayed panel. • Acknowledges messages. • Available on every panel.
F7 (BACK) key 	• Scrolls the display to the preceding page of a panel. • Does not exit a panel. • Same function as the PgUp key.

Name and Picture of Key	Purpose
F8 (FORWARD) key 	• Scrolls the display to the next page of a panel. • Does not exit a panel. • Same function as the PgDn key.
F9 key 	No general function.
F10 (RETURN) key 	• Exits a panel and displays the main operation panel. If the main operation panel is displayed when you press F10, exits to Operating Mode Selection panel (Figure 4-3). • Discards entries you just made on panel you are exiting. • Acknowledges messages displayed on the screen.

Entering Commands

There are two types of commands. One type, that of commands entered into command files, is used to control a Matrix Switch. These commands are primarily the same as the commands entered at the switch control console and are covered in "Chapter 6: Creating and Editing Command Files: The Editfile Command." The second type runs the support processor. The general rules for entering support processor commands are covered in the following subsections.

How to Enter Commands

A complete command consists of a series of subcommands and in most cases, an associated parameter. An example of a complete command ready for execution, is:

RUN SCREEN FILENAME = FILE1.

In this case, RUN and SCREEN are the subcommands, FILENAME is the keyboard that names the paramter, and FILE1 is the parameter itself. Some commands consist only of subcommands; they do not need a parameter or a parameter keyword.

A command must be complete before it can be executed.

There are three different ways to enter commands:

- Entering the commands one part at a time in response to requests made by the panels
- Entering the commands one part at a time through direct access of the panels
- Entering the complete command in the command prompt area.

Entering Commands One Part at a Time
Entering commands one part at a time is the easiest way to enter commands if you are not familiar with the command syntax or the panel IDs. There are two different types of panels that ask you for command information: those that ask for a command selection and those that ask for a parameter selection. These panels step you through the operating procedures and help you enter a complete command. After you enter the requested information at each panel, a new panel is displayed that requests further definition of the command. This process continues until you have entered a complete command.

Command Selection
A panel that requests a command selection offers a command menu. Figure 2-4 is a typical example of the command menu portion of a panel.

```
SELECT THE ID OF THE DESIRED COMMAND, THEN PRESS ENTER.

ID      COMMAND       DESCRIPTION

1       RUN           SUBMIT AN EXISTING COMMAND FILE FOR EXECUTION
2       TRIGGER       DEFINE SYSTEM RESPONSES TO TRIGGER CONDITIONS
3       EDITFILE      CREATE, MODIFY, OR DELETE A COMMAND FILE
4       FILE          PRINT, LIST, DELETE, RENAME, OR COPY DISK FILES
5       PROTECTION    DEFINE USERS, PASSWORDS, PROTECTION CLASSES
6       NODE          SET NODE CONFIGURATION PARAMETERS
```

Figure 2-4. Example of a Command Menu

In this example, six different command selections are available. As on all command menus, each command choice is identified by an ID number, a COMMAND keyword, and a DESCRIPTION of the command.

- Use the ID number to make a menu selection.
- Use the COMMAND keyword only when you directly enter a complete command. It shows the way to type the subcommands portion of an entire command.
- The DESCRIPTION briefly states the purpose of the command.

> **Note:** Because of the support processor's protection features, not all commands are available to all users. For commands available to you, the COMMAND and command DESCRIPTION are displayed in cyan and command ID is displayed in white. For unavailable commands, all columns are displayed in grey.

When a command menu is displayed, the cursor is positioned immediately to the right of the command prompt. To select a command, type its ID number and press the Enter key ↵. For example, to select TRIGGER from the menu shown in Figure 2-4, press 2 and then press the Enter key ↵.

After you have selected a command and pressed the Enter key ↵:

- The command is executed. This can only happen for commands for which no parameter is needed.
- Another panel, requesting more information about the command, is displayed. If it is another command selection panel, the selection process is the same.

Each panel that follows a command selection panel displays in the command area the partial commands that led to that panel. The partial commands are made up of the first three letters of the COMMAND keywords. For example, if you selected TRIGGER from the menu shown in Figure 2-4, the panel that follows displays TRI immediately to the right of the command prompt. If you selected the TIME command from that panel, the next panel displays TRI TIM in the command area. This process continues for each command menu. The purpose of the partial command display is to help you learn the complete form of a command for direct command entry. If a partial command is shown in the command area, the cursor is below the first letter of the partial command. As soon as a command ID is typed, the partial command is cleared and the ID number is displayed.

Parameter Selection

A screen requesting a parameter selection offers a fill-in-the-blank task. Figure 2-5 is a typical example of the parameter selection portion of a panel.

```
PLEASE ENTER YOUR CHOICES FOR THE FOLLOWING PARAMETERS, THEN PRESS ENTER.
POSSIBLE VALUES ARE GIVEN IN PARENTHESES, WITH DEFAULT VALUE FIRST.
IF ANY CHOICE IS NOT SUPPLIED, THE DEFAULT WILL BE USED.

KEYWORD     CHOICE      DESCRIPTION

FILENAME    _________   NAME OF FILE
DEVICE      _____       FIXED DISK OR FLOPPY DISKETTE (FIXED, FLOPPY)
TYPE        _____       TYPE OF FILE (COMMAND, LOG, REPORT)
OUTPUT      _____       OUTPUT DEVICE (SCREEN, PRINTER)
```

Figure 2-5. Parameter Selection Panel

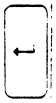
In this example, the panel requests the entry of four different parameters. Some parameter selection panels request only one parameter. But in all parameter selection panels, there is for each parameter(s) a KEYWORD, a CHOICE area, and a DESCRIPTION.

- The KEYWORD shows you the way to type the parameter keyword portion of the command, and is used only when you directly enter a complete command.
- The CHOICE area is where the parameter(s) is entered.
- The DESCRIPTION states the name of the parameter. If there are only a few choices for a parameter, each selection is displayed in parentheses after the name of the parameter. This is shown is the above example by (FIXED, FLOPPY). If the parameter selections are displayed in parentheses, they are displayed the way they should be entered in the CHOICE column.

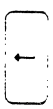
When the parameter entry panel is first displayed:

- Default values, if any, are shown in the CHOICE column.
- The cursor is at the beginning of the first CHOICE field.

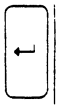
To select a parameter, type the parameter into the CHOICE column next to the parameter keyword. It does not matter if a parameter is already displayed. When you type the first character of your selection, any other entry is cleared. Use the tab key  to move the cursor to each CHOICE field into which you want to type a parameter.

When the CHOICE column is filled with the parameters you want, press the Enter key  . If you type an incorrect value for a parameter, it will be displayed in red and must be corrected before the parameters can be entered.

For example, to enter the parameter in the parameter selection panel shown in Figure 2-5, you might:

1. Type FILE1 and press the tab key  .
2. Type FIXED and press the tab key.
3. Type LOG and press the tab key.
4. Type PRINTER and press the Enter key  .

Entry of parameter(s) is always the last step in forming a command.

When the Enter key  is pressed, the command is executed if the parameters have been correctly entered.

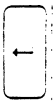
Entering Commands through Direct Panel Access
Anytime after logon, a user can cause a panel to be displayed immediately by entering the panel ID. Arriving at a panel this way is the same as arriving at it through command selection.

Through direct panel access, partial commands can be formed just as they are formed through command selection. Direct panel access is a good way to jump from one operation to another without going through command selection menus. It can be used to directly execute only commands for which no parameter values are needed.

The only panels that cannot be directly accessed are:

- Any panel that follows a parameter selection
- The User Logon panel (Figure 4-2).

REMEMBER: Panels within the direct FELSWCH control and 3727 emulation modes are governed by their own rules. These panels cannot be accessed through panel ID.

To access a panel directly, enter its panel ID (which is named in the header) into the command area, and press the Enter key  .

Appendix C gives list of all panels that can be accessed by entering panel ID.

> **Note:** Because of the support processor's protection feature, not all panels available through direct access are available to all users. If a command is not available to a user, the panels that result from that command are also not available.

Entering Complete Commands
Anytime after logon, commands can be directly entered into the command area and executed. To enter a command directly, you must know the correct form of the command. This means knowing the command keywords, parameter keywords, and parameter values that make up a command. All valid, complete commands are listed in Appendix C.

REMEMBER: The correct form of a command can also be seen on the command and parameter selection panels. These panels show you, on a step-by-step basis, the command keywords, parameter keywords, and parameter values. Each panel also displays, in the command area, partial commands as entered through command and parameter selection.

To enter a command in the command area:

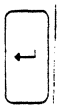
1. Using the tab key  move the cursor to the first space to the right of the command prompt.

2. If no partial command is displayed, type in the command. If a partial command is displayed:

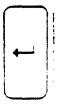
   a. Press the End key. This moves the cursor one space past the end of the partial command.

      Note: Trying to enter anything except END clears the partial command.

   b. Type in the rest of the command.

3. Press the Enter key  . If the command is accepted, it is executed.

The following general rules apply to entering commands in the command area:

- Partial commands cannot be executed. A complete command must be displayed before you press the Enter key  .

- If a partial command is displayed in the command area, you can complete the command, then execute it.

- You can enter a different command from the one shown (in whole or in part) in the command area, and execute it.

- Because of the support processor's protection feature, not all commands are available to all users.

- When entering commands, some abbreviations are allowed. These are described in Appendix C.

Acknowledging Messages

If a system message (a command error or an event report) is displayed in the message area, it remains on display until acknowledged. At most,

two messages can be displayed at one time. When a message is acknowledged, it is cleared from the message area. Acknowledging a message does not perform any function other than making room for more messages. To acknowledge a message, press the Enter key  .

> **Note:** A message must be displayed at least two seconds before it can be acknowledged.

Some of the function keys acknowledge messages in addition to their particular function. These are:

- F1 (HELP)
- F3 (END)
- F6 (REDISPLAY)
- F10 (RETURN).

Chapter 3

Getting Started

This chapter describes how to set up your support processor for operation.

Contents

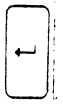
Preliminary Instruction 3-1
Turning On the Support Processor and Logging On 3-1
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Preliminary Instruction

This chapter is set up in a logical sequence; the first time you turn on your support processor, you should proceed through the operations in this chapter in the order presented. All of the procedures in this chapter are described in detail in subsequent chapters.

Turning on the Support Processor and Logging On

To turn on the support processor and log on:

1. Insert the Program Diskette into the diskette drive (see Figure 4-1).
2. Set the On/Off switch on the right side of the CRT to 1.
3. Set the On/Off switch on the right side of the system unit to On. After a 10-minute delay (in which time the system loads from the diskette), the screen displays the User Logon panel (Figure 4-2).
4. Type MANAGER into the CHOICE column for your USER name and press the tab key  .
5. Type PASSWORD into the CHOICE column for your PASSWORD. The password characters appear in the CHOICE column as asterisks(*).
6. Press the Enter key  . After approximately 30 seconds, the screen displays the Operating Mode Selection panel (Figure 4-3).

Formatting the Fixed Disk (Initial Software Loading)

To format the fixed disk:

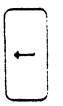
1. Check that:

   The support processor is turned on.

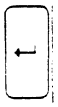
   You are logged on.

   The Program Diskette is inserted into the diskette drive.

   The Operating Mode Selection panel (Figure 4-3) is displayed on the screen.

2. Type into the command area: FILE FORMAT FIXED.
3. Press the Enter key  . This formats the support processor fixed disk. It will take approximately 6 minutes to complete.

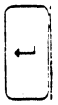
Note: If the support processor fixed disk was previously formatted for the DOS operating system, the program load may fail. If this occurs, the screen displays diagnostic information followed by a line with an asterisk (*) in the first column. Type G in the position after the asterisk

and press the Enter key  . Repeat typing G and pressing the

Enter key  until the Operating Mode Selection panel (Figure 4-3) is displayed.

4. Remove the Program Diskette from the diskette drive.
5. Insert the Help Diskette in the diskette drive.
6. In the command area, type

   FILE RESTORE TYPE = PROGRAM FILE = *

7. Press the Enter key  .

This will copy the Help files onto the fixed disk of the support processor and will require approximately 15 minutes to complete.

8. Press, at the same time, the Ctrl, Alt, and Del keys. This restarts the system from the fixed disk.

Setting the Support Processor Node Number

Each support processor and Matrix Switch in a Matrix Switch network is assigned a unique node number. The node number is used to identify and distinguish each Matrix Switch and support processor in the network.

To assign your support processor a node number:

1. Check that:

   The support processor is turned on.

   You are logged on.

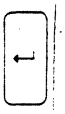
   The fixed disk is formatted.

   The Operating Mode Selection panel (Figure 4-3) is displayed on the screen.

2. Type into the command area: NODE NODENUMBER NUMBER = ***node number.***

Node number represents the node number of your support processor. For a node number value, you can select any hexadecimal number from 01 to 3D. The number cannot already be assigned to another support processor or Matrix Switch in your Matrix Switch network.

> **Note:** Assigning a node number to the support processor causes the support processor to reinitialize all values and automatically logs you off.

3. Press the Enter key  . Initialization will take approximately two minutes. When initialization is complete, the User Logon panel (Figure 4-2) is displayed. If you are continuing with this procedure you should log on again, using MANAGER as your USER name and PASSWORD as your PASSWORD.

Setting a New Password

As the manager, your password, currently PASSWORD, allows you to log on. To prevent other users from logging on using MANAGER and PASSWORD, you will probably want to change your password. Once you change your password, it is important to remember it. If you forget your password, you cannot log on, and retrieving a forgotten password is very difficult. For more information on this, refer to "The Manager User Name" in Chapter 11.

To select a new password:

1. Check that:

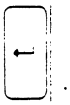
   The support processor is turned on.

   The fixed disk is formatted.

   The Operating Mode Selection panel (Figure 4-3) is displayed on the screen.

2. Type into the command area: PROT PASSWORD PASSWORD = ***password***.

Password represents a new password that you are assigning to yourself. The **password** can be an alphanumeric text string of 0 to 12 characters. You can leave **password** blank, in which case you have no password. If you have no password, anybody, without entering a password, can log on by entering the USER name MANAGER.

3. Press the Enter key  .

Setting the Primary Asynchronous Communication Adapter Link Speed

The support processor primary asynchronous communication adapter (primary ACA) connects the support processor to the Matrix Switch and provides the interface to the Matrix Switch network. To set the support processor primary ACA link speed:

1. Check that:

   The support processor is powered on.

   You are logged on.

   The fixed disk is formatted.

   The Operating Mode Selection panel (Figure 4-3) is displayed on the screen.

2. Type into the command area: NODE PRIASYNCH SPEED = ***primary ACA link speed***

Primary ACA link speed represents the link speed of the support processor connection to the Matrix Switch. Your choices for link speed are 75, 150, 300, 600, 1200, 2400, or 4800 bits per second. The link speed you select should match the dip switch setting on the Matrix Switch network control interface I/O panel to which your support processor connects. Information about the network control interface I/O panel can be obtained from the IBM Customer Engineer.

3. Press the Enter key  .

Setting Up the Matrix Switch

This section describes how to perform the initial setup of a Matrix Switch from the support processor. If your support processor is connected to a Matrix Switch already in operation (that is, the Matrix Switch is already operated by a switch control console or another support processor), you can skip this section. If your support processor is the only control console connected to the switch, you need to use your support processor to:

- Bring up the switch
- Set switch parameters
- Define configuration tables.

These procedures are performed in direct FELSWCH control mode, in which the support processor acts and is operated as a switch control console.

All of the procedures performed in direct FELSWCH control mode are described in Chapters 1 and 2 of the *IBM 3728 Commmunication Control Matrix Switch Operations Guide*, GA27-3643.

To set up the Matrix Switch from your support processor:

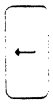
1. Check that:

   The support processor is powered on.

   You are logged on.

   The fixed fisk is formatted.

   The Operating Mode Selection panel (Figure 4-3) is displayed on the screen.

2. Type 3 into the command area and press the Enter key  . The screen displays the Switch Control Console Command Selection panel (Figure 5-1). This is the main selection panel in direct FELSWCH control mode.

3. Refer to the *IBM 3728 Communication Control Matrix Switch Operations Guide*, GA27-3643, and perform all the procedures in Chapter 12.

   Note: You will want event reports from the Matrix Switch sent to your suppport processor. This means you want the **event report destination** of the Matrix Switch to be your support processor. To do this, when you are in the Edit Switch panel, be sure to set the switch event report destination equal to your support processor node number.

4. After setting up the Matrix Switch, press and hold the Ctrl key and then press the Esc key. The screen displays the Operating Mode Selection panel (Figure 4-3).

Setting the Support Processor Name, Date, Time, Alarm Repeat Timer, and Event Report Destination

After performing all the procedures in this chapter, you are ready to edit the support processor name, date, time, alarm repeat timer, and event report destination. These parameters are assigned to the support processor in direct FELSWCH control mode. In direct FELSWCH control mode, you should use the node number of the support processor (as assiged in "Setting the Node Number") as the number of the selected switch, you can edit the support processor parameters as if it were a Matrix Switch.

All of the procedures performed in direct FELSWCH control mode are described in the *IBM 3738 Communication Control Matrix Switch Operations Guide*, GA27-36543.

Notes:

1. To edit switch parameters in direct FELSWCH control mode, you may need a password on the Matrix Switch. Your Matrix Switch password is ***not*** necessarily the same as your support processor password.

2. Setting the support processor event report destination enables the support processor to send its event reports elsewhere in the Matrix Switch network. Setting the support processor event report destination does ***not*** enable the Matrix Switch to send messages to the support processor. To have Matrix Switch messages sent to the support processor, set the Matrix Switch event report destination as described in "Setting Up the Matrix Switch," in this chapter.

3. In the event of a loss of power on the switch or the support processor, you must ensure that the **time** and **date** are correct after power is restored.

To set the support processor parameters:

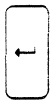
1. Check that:

   The support processor is powered on.

   You are logged on.

   The fixed disk is formatted.

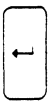
   The Operating Mode Selection panel (Figure 4-3) is displayed on the screen.

2. Type 3 into the command area and press the Enter key  . The screen displays the Switch Control Console Command Selection panel (Figure 5-1). This is the main selection panel in direct FELSWCH control mode. As in switch control console operations, you can run through operations by making menu selections or you can enter the full form of commands. Figure 3-1 shows you the switch control console commands that edit the support processor parameters. All of the commands given in Figure 3-1 are fully described in the *IBM 3728 Communication Control Matrix Switch Operations Guide*, GA27-3643. After completing all of the commands in Figure 3-1, go to step 3.

Switch Control Console Command	Explanation
Selecting Switch, Password, and Mode	
SEL = node number of support processor	Selects support processor as "selected switch."
SEL M = PGM	Selects program mode.
Editing Name, Date, Time, Alarm Repeat Timer, and Event Report Destination	
EDI S NAM = name	Edits support processor name. Name can be an alphanumeric text string of 3 to 6 characters. Name must begin with a letter.
EDI S D = mm/dd/yy	Edits current date as displayed on the support processor panels' header.
EDI S T = hh/mm/ss	Edits current time as displayed on the support processor panels' header.
EDI S ART = alarm repeat timer	Edits support processor's alarm repeat timer. Alarm repeat timer can be from 1 to 31 minutes, in increments of 1 minute.
EDI S ERD = name or node number	Edits support processor's event report destination. Name or node number can be any node in the Matrix Switch network.

Figure 3-1. Editing Support Processor Parameters: The Switch Control Console Commands

3. After editing the support processor parameters, press and hold the Ctrl key and then press the Esc key. The screen displays the Operating Mode Selection panel (Figure 4-3).

4. Type 4 and press the Enter key  . The screen displays the User Logoff panel (Figure 4-5).

5. Type Y and press the Enter key  . The screen displays the User Logon panel (Figure 4-2).

Chapter 4

Logging On, Logging Off, and the Main Selection Panels

This chapter describes how to turn on the support processor, begin operations, and end operations.

Contents

Preliminary Procedure 4-1
Turning On the Support Processor 4-1
Logging On and the Operating Mode Selection Panel 4-2
Logging On to a Remote Node 4-4
The Support Processor System Functions Panel: Main Command Selections 4-4
Logging Off 4-5
Turning Off the Support Processor 4-6

Preliminary Procedure

Before the support processor can be operated as covered in this chapter, it must first be:

- Installed, as described in the *IBM 3728 Communication Control Matrix Switch, Installation Instruction Guide,* SY27-0274
- Initialized, as described in Chapter 3.

Turning on the Support Processor

To turn on the support processor:

1. Set the on/off switch on the right side of the CRT to 1 (refer to Figure 4-1).

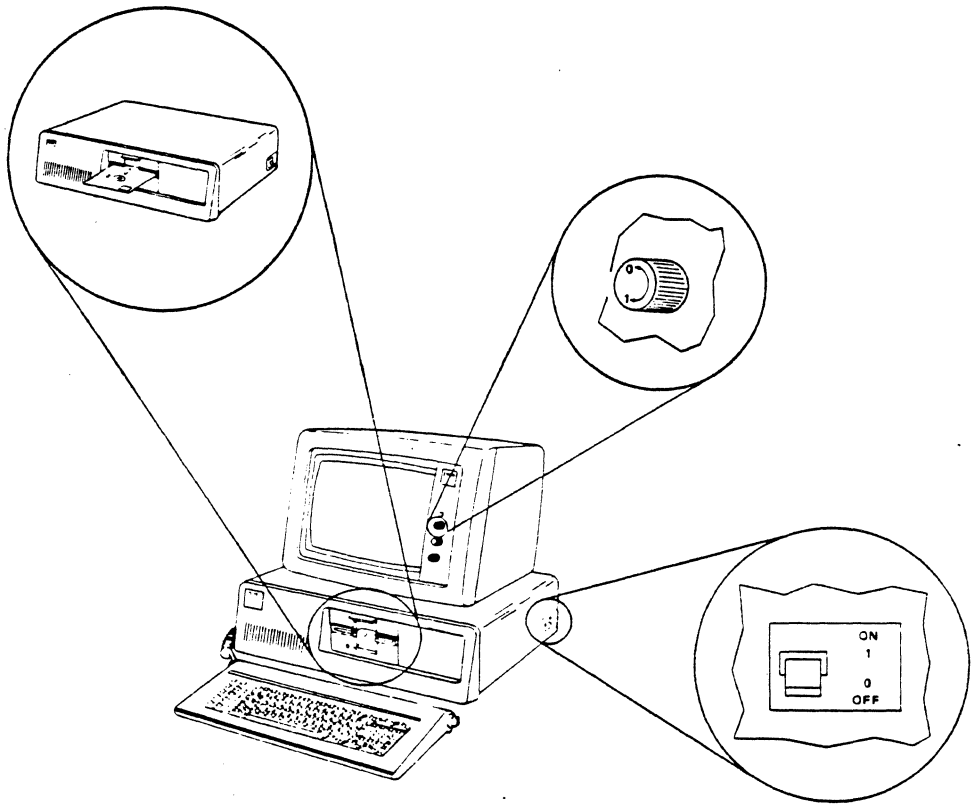


Figure 4-1. Power Switches and Diskette Drive

2. Set the On/Off switch on the right side of the system unit to On. After a 10-minute delay (in which time the system loads from the diskette), the screen displays the User Logon panel (Figure 4-2).

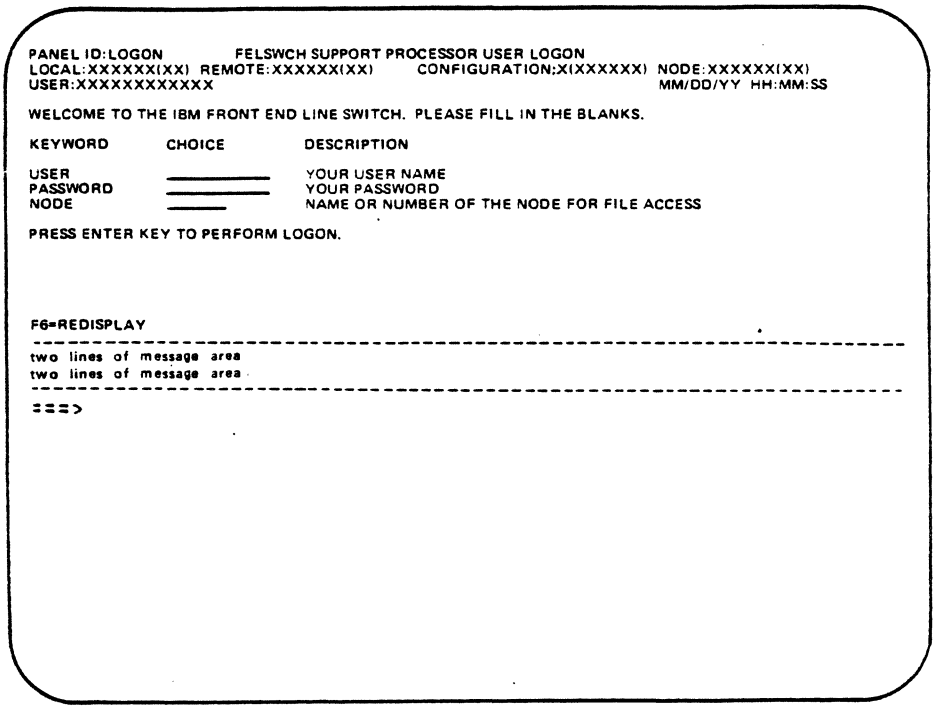


Figure 4-2. User Logon Panel

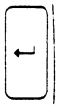
Logging On and the Operating Mode Selection Panel

After software initialization, support processor turn-on, or logoff of previous operation, the User Logon panel (Figure 4-2) is displayed. This panel asks you to enter logon information. To log on:

1. Complete the CHOICE column. The following rules apply to your selections:

- USER must be a valid user name.
- PASSWORD must be the password that matches the user name.
- NODE is the name or number of the support processor from which fixed-disk files are accessed. You can select a remote support processor (see "Logging On to a Remote Node"). The default value is the LOCAL support processor as identified in the panel header.

Entries typed into the PASSWORD area appear as asterisks (*).

2. Press the Enter key  . If the user name and password are correct for

the selected node, the Operating Mode Selection panel (Figure 4-3) is displayed after a delay of approximately two and one-half minutes.

```
PANEL ID:MODE              OPERATING MODE SELECTION
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)     CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                                               MM/DD/YY HH:MM:SS

PLEASE SELECT THE ID OF THE DESIRED OPERATING MODE.

ID        MODE        DESCRIPTION

1         EMULATION   3727 EMULATION FOR MOSS CONTROL
2         SYSTEM      SUPPORT PROCESSOR AND FILE FUNCTIONS
3         FELSWCH     DIRECT FELSWCH CONTROL
4         LOGOFF      USER LOGOFF / END OF SESSION
5         HELP        ASSISTANCE WITH ANY COMMAND


F1=HELP 5=PRINTABORT 6=REDISPLAY
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------
===>
```

Figure 4-3. Operating Mode Selection Panel

This panel asks you to select the support processor mode in which you want to operate. All support processor operations, except logon, are accessed through this panel. The modes are further described in this book in the following chapters.

- EMULATION is covered in Chapter 7.
- SYSTEM is covered in "The Support Processor System Functions Panel: Main Command Selections" in this chapter.
- FELSWCH is covered in Chapter 5.
- LOGOFF is covered in "Logging Off" in this chapter.
- HELP is covered in Chapter 13. The HELP selection on this panel is the same as pressing function key F1 (HELP).

You can always return to the Operating Mode Selection panel by performing the following operations.

- In the emulation and FELSWCH modes, by holding Ctrl key down and then pressing the Esc key.
- In SYSTEM and HELP modes, by pressing, one or more times, function key F10 (RETURN) or Ctrl key and ESC.
- In logoff mode, by choosing not to log off.

Logging On to a Remote Node

Logging on to a remote support processor is the same procedure as logging on to the local support processor, except that you enter the name or number of a remote support processor in the CHOICE column for keyword NODE on the User Logon panel (Figure 4-2).

If you are logging on to a remote support processor, remember:

- You must log off the local support processor before logging on to the remote support processor.
- Your password and user name are not necessarily recognized as valid at the remote support processor.
- Your access privileges are not necessarily the same at the remote support processor as at the local support processor.
- You cannot perform functions that require the use of:

  The trigger command

  File commands involving the diskette drive

  The node command.

- You must log off the remote node before logging on to the local node.
- You do ***not*** have to log on to a remote support processor to perform remote 3727 emulation.

The Support Processor System Functions Panel: Main Command Selections

The SYSTEM selection from the Operating Mode Selection panel (Figure 4-3) allows you to select from all of the support processor main commands.

When you select SYSTEM from the Operating Mode Selection panel (Figure 4-3), the Support Processor System Functions panel (Figure 4-4) is displayed.

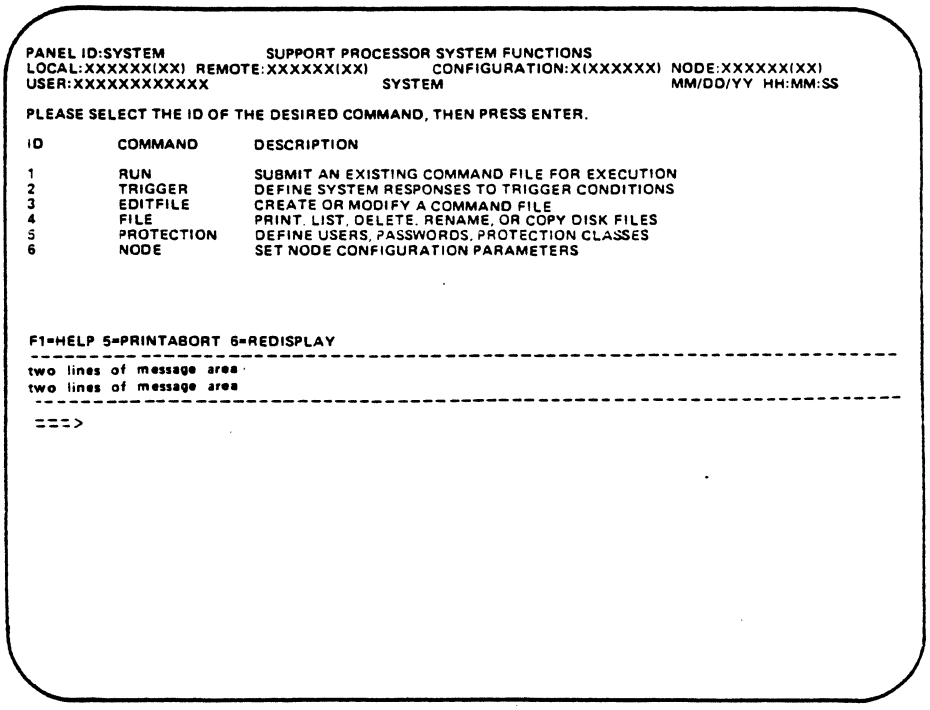


Figure 4-4. Support Processor System Functions Panel

This panel asks you to select a support processor main command. Each of these selections results in the display of a panel that is unique to the command. These panels ask you how you want to proceed within your command selection. The commands, and where each is further described in this book, are as follows:

- RUN is covered in Chapter 8.
- TRIGGER is covered in Chapter 9.
- EDITFILE is covered in Chapter 10.
- FILE is covered in Chapter 10.
- PROTECTION is covered in Chapter 11.
- NODE is covered in Chapter 12.

Logging Off

The LOGOFF selection from the Operating Mode Selection panel (Figure 4-3) allows you to log off.

When you select LOGOFF from the Operating Mode Selection panel (Figure 4-3), the User Logoff panel (Figure 4-5) is displayed.

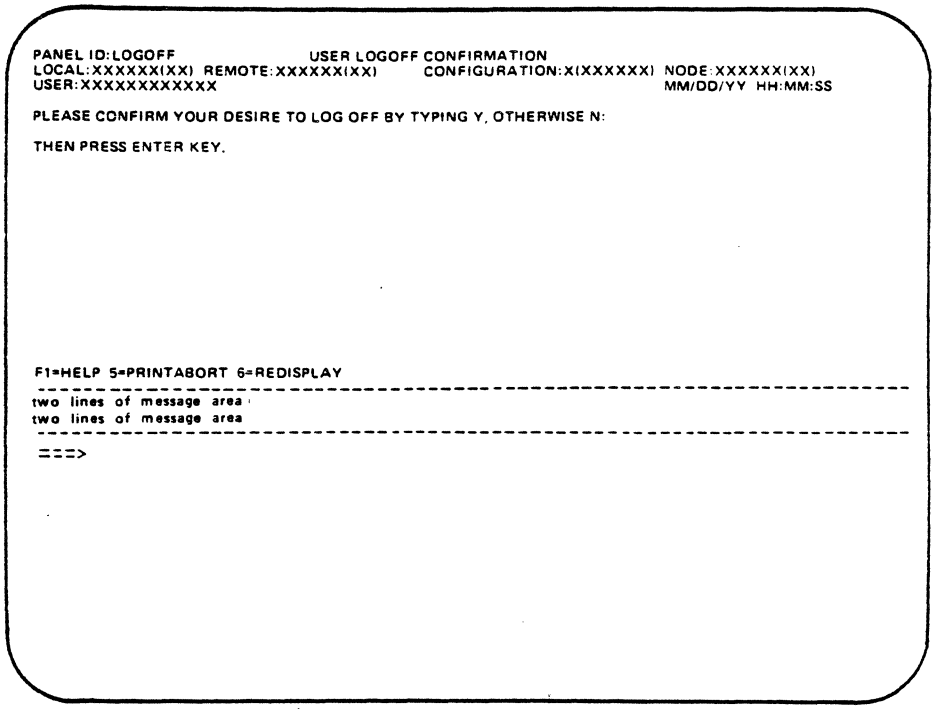


Figure 4-5. User Logoff Panel

This panel asks you to confirm your desire to log off. Its purpose is to make sure that you do not accidentally log off.

To log off, type Y and press the Enter key ↵ . The User Logon panel (Figure 4-2) is displayed on the screen.

If you decide not to log off, type N and press the Enter key ↵ .

The Operating Mode Selection panel (Figure 4-3) is displayed.

Turning Off the Support Processor

It may not be necessary to turn off the support processor after an operating session. If it is necessary:

1. Log off (as described in "Logging Off").
2. Set the on/off switch on the right side of the CRT to 0.
3. Set the support processor On/Off switch (on the right side of the system unit) to Off.

Chapter 5

Direct FELSWCH Control

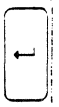
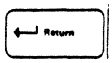
This chapter describes how to use the support processor to emulate the switch control console, which is a standard ASCII terminal that is used to control a Matrix Switch network.

Contents

When Direct FELSWCH Control is Used 5-1
Entering Direct FELSWCH Control 5-1
Exiting Direct FELSWCH Control 5-1

When Direct FELSWCH Control is Used

The *IBM 3728 Communication Control Matrix Switch Operations Guide*, GA27-3643, describes all of the switch control console operations. The support processor is used in direct FELSWCH control mode whenever the support processor is needed to perform a function that can be performed by the switch control console, and that function is not included in a command file. This would be the case when you are initially setting up the support processor.

- The support processor Enter key  is the same as the switch control console  key.
- Function keys F1 through F9 have no use in FELSWCH control.
- The cursor control keys (up, down, right, left) have no use in FELSWCH control.

Entering Direct FELSWCH Control

Direct FELSWCH control is selected from the Operating Mode Selection panel (Figure 4-3), which is described in Chapter 4. To enter direct FELSWCH control:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 3 into the command area and press the Enter key  . The Switch Control Console Command Selection panel (Figure 5-1) is displayed.

This panel is the main menu for switch control console operation. It is the same panel that is displayed on the switch control console. All operations from this point on are identical to switch control console operations. For a description of these operations, refer to the *IBM 3728 Communication Control Matrix Switch Operations Guide*, GA27-3643.

Exiting Direct FELSWCH Control

To exit direct FELSWCH control, press and hold the Ctrl key and then press the Esc key. The support processor displays the Operating Mode Selection panel (Figure 4-3).

```
LOCAL    :SWITCH=FELS(000)00 MM/DD/YY HH:MM:SS BASE=HEX REV X.X
SELECTED:SWITCH=FELS(000) CONFIGURATION=N(OFFLINE) MODE=EXA

COMMAND ENTERED:

COMMAND     DESCRIPTION

SEL         SELECT SWITCH CONFIG, MODE & PASSWORD
RES         RESET SWITCH RELOAD/RECONFIGURE
EDI         EDIT PARAMETERS
CON         CONNECT PORT/GROUP
SUB         SUBSTITUTE PORT/GROUP
DIS         DISCONNECT PORT/GROUP
MON         MONITOR PASSIVE/ACTIVE
ALA         ALARM PORT/GROUP
REP         PRINT REPORT
MES         SEND MESSAGE

ENTER A COMMAND, THEN HIT (CR) KEY:
```

Figure 5-1. Switch Control Console Command Selection Panel

Chapter 6

Creating and Editing Command Files: The Edit File Command

This chapter describes how to use the edit file command to create and edit command files.

Contents

General Considerations in Creating and Editing Command Files 6-1
Pseudo Commands 6-2
Special Considerations in Creating and Editing Command Files 6-7
Editing and Creating Command Files 6-7
Edit File Error Messages 6-9
Edit File Cursor Control and General Entry Practices 6-10
Edit File Function Keys 6-11
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Inserting Text Within the Command File 6-13
Ending an Edit File 6-15

General Considerations in Creating and Editing Command Files

A command file is a sequence of commands for a Matrix Switch. Each command file is identified by a file name. Command files can contain two types of commands:

- **Switch control console commands** are the commands normally issued by a switch control console. For example, these commands include the select and connect commands. All of the commands available through the switch control console can be included in a command file. In this way, through the use of command files, a support processor can do anything a switch control console can do.

- **Pseudo commands** are commands that are unique to the support processor. They generally do not affect the Matrix Switch as much as they assist you in creating and executing command files. Do not confuse pseudo commands with the support processor commands, such as trigger, run, and edit file, that are selected from the Support Processor System Functions panel (Figure 4-4). These commands cannot be used in command files. On the other hand, pseudo commands can only be used in command files.

This chapter does not cover how to execute a command file. Executing command files is covered in Chapters 8 and 9.

When you create and edit command files, all of the rules to which a switch control console operator is subject apply to you as well. Remember, a command file is basically a sequence of switch control console commands, and as such, must be ordered logically. A logical ordering would be consistent with the order in which the commands are entered at a switch control console on a panel-by-panel selection basis.

A very important consideration is the switch control console select, reset, and edit commands. As at the switch control console, these commands should generally be set up first in the command file if later commands are to make sense.

When you select a Matrix Switch, you are considered just another user on that switch. Such matters as access rights, user name, and password have the same meaning. Access rights, user name, and password at your support processor are not necessarily the same as the selected switch.

You have the option of entering in command files switch control console keyboard functions, Ctrl-U, and Ctrl-N. These perform in the command file the same function as pressing these keys at a switch control console.

You can change some parts of your support processor or a remote support processor configuration through switch control console commands. To do so, select the support processor NODE name or number (as shown in the support processor panel headers) as the selected switch. Switch control console commands that can configure support processors are limited to:

- Edit switch name
- Edit switch date
- Edit switch time
- Edit switch alarm report timer
- Edit switch event report destination.

Pseudo Commands

Pseudo commands are commands that affect the way a command file is interpreted and executed. A command file does not have to contain pseudo commands; in most cases, they are a convenience.

Pseudo commands are intercepted by the support processor and preprocessed before subsequent switch control console commands in the command file are sent to the Matrix Switch network. If the support processor finds an error in a pseudo command, the execution of the command file is halted. Note that this situation is not always true for switch control console commands. An error in these commands may or may not halt command file execution, depending on the status of the error pseudo command.

Pseudo commands are typed into command files preceded by an asterisk (*). If any other command in a command file is preceded by an asterisk, it is interpreted as a pseudo command error.

The following sections describe each of the pseudo commands.

Error Pseudo Command

The error pseudo command determines whether, when an error is found in a switch control console command, execution of the command file halts or continues. The error pseudo command is typed into a command file in two ways:

- *ERROR ABORT
- *ERROR CONTINUE

If ERROR ABORT is used, an error in a switch control console command results in the termination of the command file.

If ERROR CONTINUE is used, an attempt is made to execute all of the commands in the command file.

If you do not enter the error pseudo command in a command file, the default is ERROR CONTINUE.

Parameter Assignment Pseudo Commands

A command file can contain up to 25 parameters, [P1] through [P25], which are assigned and reassigned values with the pseudo commands. The functions of [P1] through [P25] in command files are described in the following sections.

Automatic Assignment of Parameters [P1] Through [P4]
Parameters [P1] through [P4] are automatically assigned values in command files that are triggered by event reports. No particular pseudo command is needed; the inclusion of [P1] through [P4] is sufficient to put into effect the parameter assignment. In all other command file executions, [P1] through [P4] are not assigned values automatically, and must be defined with the define and input pseudo commands.

In the case of command files triggered by event reports, [P1] through [P4] are used to pass information from the event report into the command file that the event report triggers. It is essential to understand how event report-triggered command files operate before learning the use of [P1] through [P4]. "How Event-Driven Triggers Operate" in Chapter 9 describes this.

Parameters [P1] through [P4] will assume different values, depending on the type of event (signal alarm, port card offline, or port card online) that triggers the command file.

- In a command file triggered by a signal alarm event:

  [P1] is the switch name or node number.

  [P2] is the port name or number.

  [P3] is the signal name.

  [P4] is the alarm number.

- In a command file triggered by a port card online or offline event:

  [P1] is the switch name or node number.

  [P2] is the card number.

  [P3] and [P4] are not defined.

As an example, an event report that would trigger a command file could be:

12:39:55 E123 S = SWCH1(009) 40 PORT PORT1(23) ALARM #0 (RTS) and the command file it triggers could be:

SEL S = [P1] C = A M = PGM

SUB P PN = [P2] FOR = 10

ALA P PN = [P2] D[P4]

ALA P PN = 10 SAP S[P4] = [P3]

When the event report is received by the support processor, the values represented by [P1] through [P4] are taken from the event report and substituted into the command file. After these substitutions, the command file is triggered as:

SEL S = 9 C = A M = PGM

SUB P = 23 FOR = 10

ALA P PN = 23 DO

ALA P PN = 10 SAP SO = RTS

After they are used in a command file to take information from an event report, [P1] through [P4] can be redefined using the define and input pseudo commands.

Define Pseudo Command
The define pseudo command allows you to assign any value to [P1] through [P25]. The define pseudo command replaces any earlier assignment of a parameter value.

For example, the commands:

*DEFINE [P1] = PORT

CON P PA = [P1]01 PB = [P1]02

would be preprocessed and sent to a Matrix Switch as:

CON P PA = PORT01 PB = PORT02.

You cannot define a parameter of more than 12 characters or a parameter with an embedded space. Embedded spaces and characters past the 12th are automatically deleted. Therefore, you cannot assign an entire command to a parameter.

Input Pseudo Command

The input pseudo command allows you to enter parameter values for [P1] through [P25] in the command file when the command file is executed. The input pseudo command is only usable in command files executed in screen runs (described in Chapter 8). The input pseudo command can be used only with a screen run command because a screen run execution displays the command file commands on the panel as they execute. Including an input pseudo command in a command file that is batch run or trigger run could result in a command error.

The input pseudo command is good to use in command files for which the exact parameters are not known until the command file is screen run. In an input pseudo command, you include the parameter and text asking for the value of the parameter. The length of the text must not exceed 56 characters.

For example, the input command:

*INPUT [P20] "THE PORT TO BE CONNECTED TO THE DISCONNECTED PORT"

is used to ask you, when the command file runs, to define [P20].

When the command is screen run, the text in quotation marks is preceded by ENTER and followed by a colon (:). The above example would appear as:

ENTER THE PORT TO BE CONNECTED TO THE DISCONNECTED PORT:

[P20], in all subsequent appearances in the command file, is defined as the value that is entered after the colon. [P20] can be redefined by other pseudo commands.

An example of using the input pseudo command is given in Appendix D, Part 3.

Prompt Pseudo Command

The prompt pseudo command allows you to enter a prompting message to be displayed on the screen in a command file screen run, or on the printout of any command file execution. The prompt pseudo command is especially useful in prompting a user that input is required when the command file executes. In a prompt command, you specify the prompting text to be displayed and printed out. The length of the text must not exceed 60 characters.

For example, the prompt command:

*PROMPT "THE PORT ENTERED BELOW SHOULD BE ON FELSWCH SWCH1"

would appear on the panel (in a screen run only) as:

THE PORT ENTERED BELOW SHOULD BE ON FELSWCH SWCH1

An example of using the prompt pseudo command is given in Appendix D, Part 3.

Emulator Pseudo Commands

The two emulator pseudo commands, assign and emulate, are used only in command files that set up the 3727 emulation mode of operation, which is described in Chapter 7. If these pseudo commands are in a command file executed for any other purpose, they result in a pseudo command error.

Assign Emulator Pseudo Command

The assign emulator pseudo command is used to request the use of the secondary asynchronous communication adapter in a support processor. In an assign emulator pseudo command, you specify the support processor from the Matrix Switch network that can be connected to the 3725 Communication Controller. The command looks like:

*ASSIGN EMULATOR node name

Node name is the name or node number of the selected support processor. The default value for node name is the local node, which means that if you do not specify node name, your support processor is used.

This command causes a pseudo command error if:

- A Matrix Switch is specified
- The requested support processor is already in 3727 emulation or is turned off.

Examples of using the assign emulator command are given in Appendix D.

Emulate Pseudo Command

The emulate pseudo command is used to pass control to the emulation software of the support processor selected with the assign emulator pseudo command. The emulate pseudo command always follows the assign emulator pseudo command. The command looks like this:

*ASSIGN EMULATOR node name

*EMULATE 3727

Examples of using the emulate command are given in Appendix D.

Special Considerations in Creating and Editing Command Files

When creating command files, you must keep in mind the conditions under which the command files are to be run. The following factors are important considerations:

- Parameters [P1] through [P4], when used in event report-triggered command files, are assigned values automatically from the triggering event reports. The automatic assignment can be overridden by the define pseudo commands. If you want to avoid automatic assignments, you can always avoid using [P1] through [P4] and limit your parameters to [P5] through [P25].

- The input pseudo command is effective only in command files run in the screen run mode.

- A command file set up to start a 3727 emulation session should contain the commands:

*ASSIGN EMULATOR node name

*EMULATE 3727

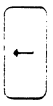
Before the emulate 3727 command, the command file can also contain switch control console commands that connect the selected support processor to the 3725 Communication Controller.

- If you do not include the error pseudo command (ERROR CONTINUE or ERROR ABORT), the default is ERROR CONTINUE.

Editing and Creating Command Files

The edit file command is selected from the Support Processor System Functions panel (Figure 4-4), which is described in Chapter 4.

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 3 into the command area and press the Enter key  .

The Edit a Comand File panel (Figure 6-1) is displayed.

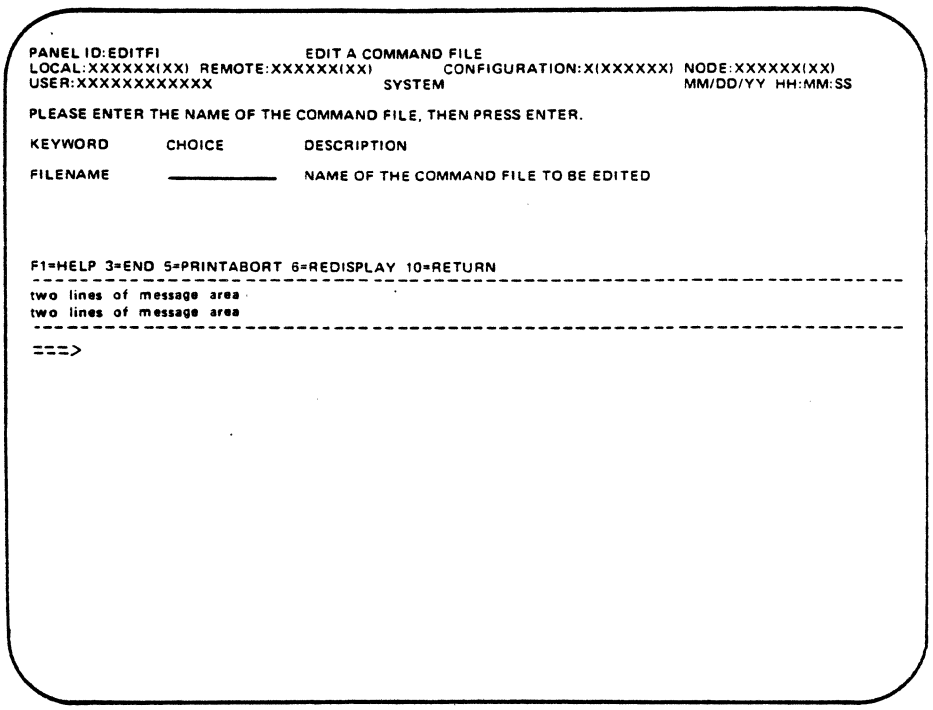


Figure 6-1. Edit a Command File Panel

This panel asks you to select the command file to be edited or created. To select a command file for editing or creating, proceed as follows:

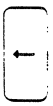
1. Type into the CHOICE column the name of an existing command file or the name of a new command file.

- If you select an existing command file, you are choosing to edit that command file.

- If you select a new command file, you are choosing to create a new command file. A file name can be an alphanumeric text string of 1 to 12 characters; special characters are not allowed.

Remember that the relevant files are those that are on the support processor selected for disk access during logon.

If you want to see a list of existing command files, press function key F1 (HELP).

2. Press the Enter Key  . The selection area of the screen is cleared, and the Command File Editor panel (Figure 6-2) is displayed.

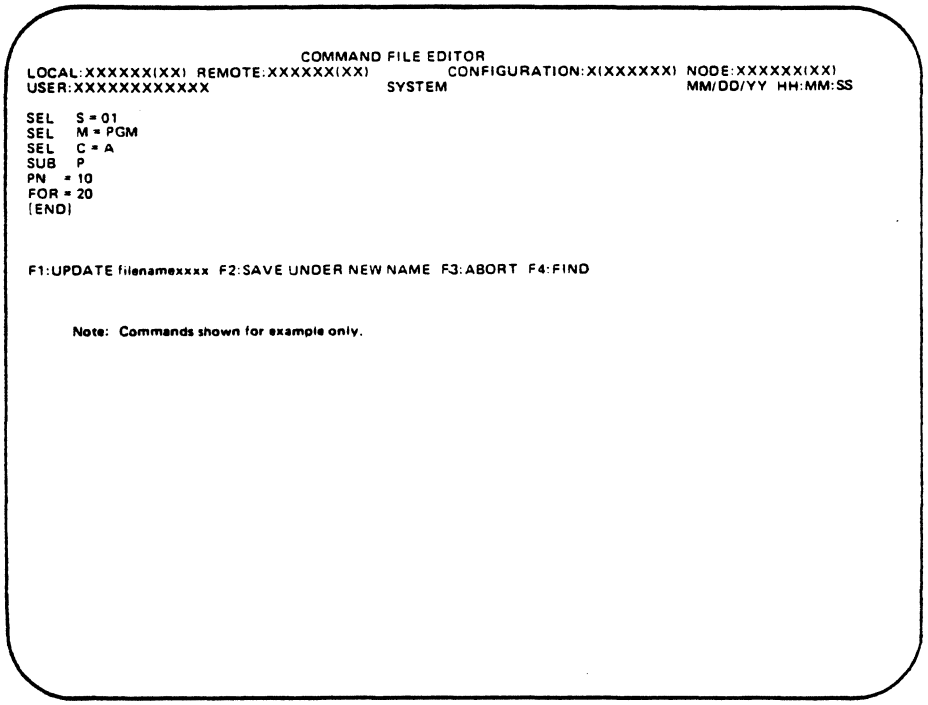


Figure 6-2. Command File Editor Panel

This is the panel in which you edit and create command files. If you selected a new command file, [END] appears at the top of the text area. Otherwise, [END] appears after the last line of text of the command file. Notice that the purpose of function keys F1 through F10 is different in an edit file session than in other support processor system functions.

You are now ready to edit or create a command file. The following sections describe the special features available during command file editing and creating.

Edit File Error Messages

Edit file error messages are displayed on the support processor during an edit file and are not displayed at any other time. These messages pertain only to the edit file session and you will see them displayed only on the Command File Editor panel (Figure 6-2). Edit file error messages:

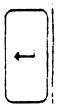
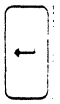
- Can only be displayed one at a time
- Are not printed out
- Cannot be sent to other nodes or received from other nodes.

Edit file error messages generally indicate you are attempting an unactable edit procedure such as improper cursor control. Edit file error messages are usually self-explanatory. Each edit file error message is explained in Appendix B.

Edit File Cursor Control and General Entry Practices

> **Note:** If you start a line with the percent sign (%), the characters on that line are displayed and/or printed out as asterisks (*) when the command file is executed. However, on the Edit Command File panel (Figure 6-1), the percent sign, as well as all subsequent characters, are displayed. This allows a user, who has access to the edit file command, access to all information in the command file.

As you type characters onto the screen, the cursor moves to the next space. You can edit existing command files by positioning the cursor and typing over the current entry.

If you try to type in the last character position on a line, you get an error message. There is no automatic new line; you must use the Enter key  to move the cursor to the beginning column of a new line. If you type over a character with the Enter key  , the character that was typed over, and any character to its right, drop to the beginning of the new line.

[END] always appears after the last line of text of a command file. As you add new lines, [END] moves automatically to the next line. You can use the cursor control keys to move the cursor anywhere except below or to the right of [END].

Switch control console keyboard functions, such as Ctrl-U, and Ctrl-N, can be entered by pressing these keys as if you were at a switch control console. They appear in the command file as [ESC], [CTRL-U], and [CTRL-N]. You can also type these entries directly, using the left and right bracket keys and the other character keys.

Comments may be inserted into command files by preceding them with a semicolon (;). Any information on a line that follows a semicolon will not be processed by the Matrix Switch, printed out, or displayed during execution of the command file. If a semicolon is entered in the first space on a line, the entire line will be treated as a comment. If a line begins with one or more blank spaces, followed by a semicolon, the blank(s) will be read as a command and cause an error.

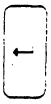
Restoring Files

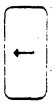
The RESTORE selection from the File Utilities panel (Figure 10-1) allows you to take copies of command, log, report, program, and system files that are on floppy diskette and restore them to the fixed disk. The support processor performs this command mostly in the background mode, allowing you to use the keyboard and screen for another activity. The exception is system files, which are restored in the foreground mode, and lock the keyboard when they are being restored.

You can only restore files if you are logged on to the local support processor. This command only restores files that were formatted using the file format command.

To restore files:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 4 into the command area and press the Enter key  . The File Utilities panel (Figure 10-1) is displayed.

4. Type 4 into the command area and press the Enter key  . The File Restore Request panel (Figure 10-10) is displayed.

The File Restore Request panel (Figure 10-10) asks you to select the parameters of a file restore request. To define your file restore request:

1. Complete the CHOICE column. The following rules apply to your selections:

- The **TYPE** of file you can restore is either a command, log, report, program, or system file. If you do not specify a TYPE, the system defaults to command.

- The **FILENAME** must either be the name of a currently defined command, log, report, program, or system file, or an asterisk (*).

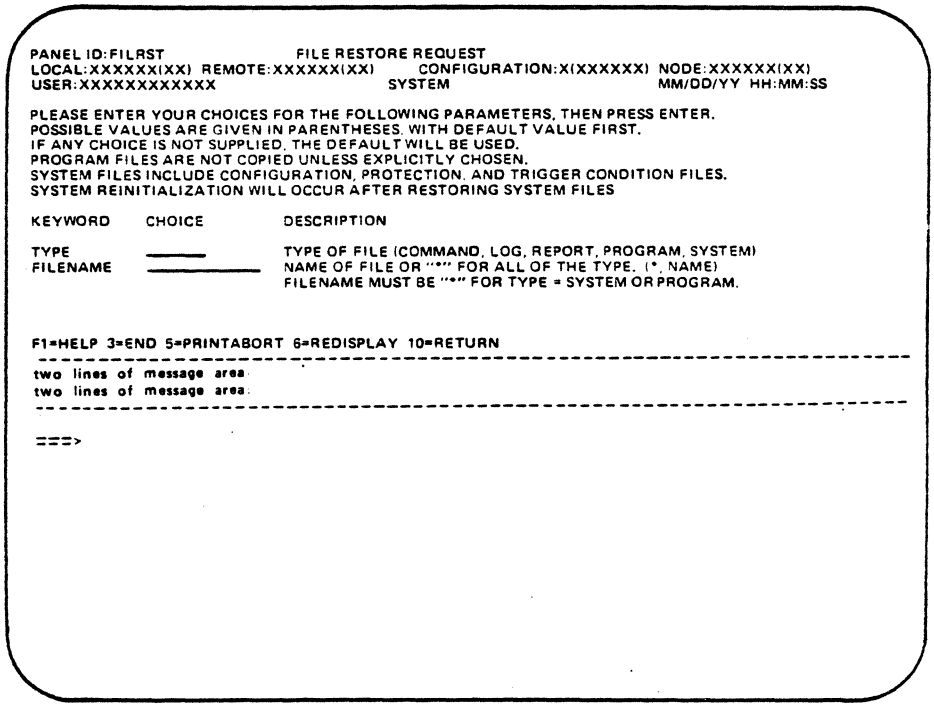


Figure 10-10. File Restore Request Panel

2. Press the Enter key ↵ . The file is copied from the floppy diskette and restored to the fixed disk.

   Note: If you open the diskette drive door while restoring is in progress, the restore command is terminated abnormally and a system message is printed.

3. If you want to stop the RESTORE operation, use the mount command. You cannot, however, stop a program file restore without getting a system message and an abnormal termination.

Deleting Files

The DELETE selection from the File Utilities panel (Figure 10-1) allows you to permanently delete a command, log, or report file from the fixed disk or floppy diskette.

To delete files:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key ↵ . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 4 into the command area and press the Enter key ↵ . The File Utilities panel (Figure 10-1) is displayed.

4. Type 5 into the command area and press the Enter key ↵ . The File Delete Request panel (Figure 10-11) is displayed.

```
PANEL ID:FILDEL                FILE DELETE REQUEST
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)   CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                SYSTEM                    MM/DD/YY HH:MM:SS

PLEASE ENTER YOUR CHOICES FOR THE FOLLOWING PARAMETERS, THEN PRESS ENTER.
POSSIBLE VALUES ARE GIVEN IN PARENTHESES, WITH DEFAULT VALUE FIRST.
IF ANY CHOICE IS NOT SUPPLIED, THE DEFAULT WILL BE USED.

KEYWORD    CHOICE          DESCRIPTION

FILENAME   _____________   NAME OF FILE
DEVICE     _____           FIXED DISK OR FLOPPY DISKETTE (FIXED, FLOPPY)
TYPE       _____           TYPE OF FILE (COMMAND, LOG, REPORT)



F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------

===>
```

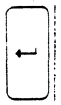
Figure 10-11. File Delete Request Panel

The File Delete Request panel (Figure 10-11) asks you to select the parameters of a file delete request. To define your file delete request:

1. Complete the CHOICE column. The following rules apply to your selections:

   - The **FILENAME** must be the name of a currently defined command, log, or report file. It must be defined on the device (fixed disk or floppy diskette) that you specify with the TYPE parameter.
   - The **DEVICE** can be the fixed disk or floppy diskette. If you do not specify a device, the system defaults to the fixed disk.
   - The **TYPE** of file you can delete is either a command, log, or report file. If you do not specify a TYPE, the default value is command.

     CAUTION: All deletions are final.

2. Press the Enter key  . A request to delete the file is queued, and control remains at the File Delete Request panel (Figure 10-11).

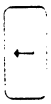
Renaming Files

The RENAME selection from the File Utilities panel (Figure 10-1) allows you to rename command or report files on the fixed disk or floppy diskette.

To rename files:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 4 into the command area and press the Enter key  . The File Utilities panel (Figure 10-1) is displayed.

4. Type 6 into the command area and press the Enter key ← . The File Rename Request panel (Figure 10-12) is displayed.

The File Rename Request panel (Figure 10-12) asks you to select the parameters of a file rename request. To define your file rename request:

1. Complete the CHOICE column. The following rules apply to your selections.

   - The **OLDNAME** must be the name of a currently defined command report file.

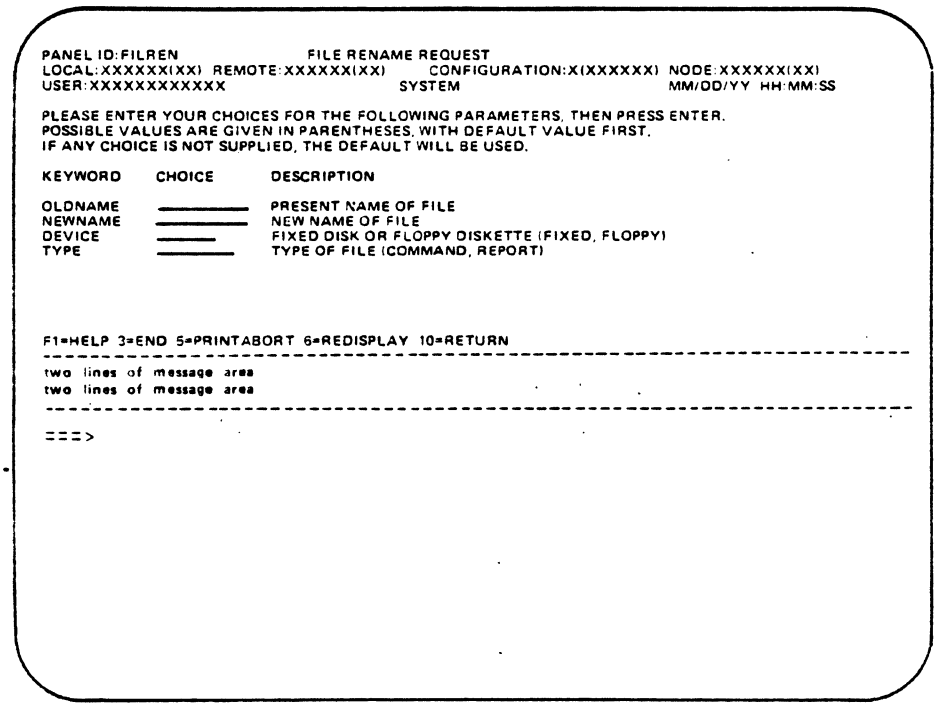
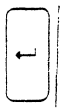


Figure 10-12. File Rename Request Panel

- The **NEWNAME** must be a file name that is not currently used. A file name can be an alphanumeric text string of 1 to 12 characters.
- The **DEVICE** can be the fixed disk or floppy diskette. If you do not specify a DEVICE, the system defaults to the fixed disk.
- The **TYPE** of file you can rename is either a command or a report file. If you do not specify a TYPE, the default value is command.

2. Press the Enter key  . A request to rename the file is queued, and control remains at the File Rename Request panel (Figure 10-12).

Transferring Files

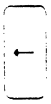
The TRANSFER selection from the File Utilities panel (Figure 10-1) allows you to copy a command or report file between local and remote support processors.

You can only transfer files if you are logged on to the remote support processor: the file transfer function is prohibited from use when you are logged on to the local node. Logging on to a remote support processor is covered in Chapter 4.

You must have print and run access to the file at the source node and modify access from the destination node. For more information on access, refer to Chapter 11.

To transfer files:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 4 into the command area and press the Enter key ↵ . The File Utilities panel (Figure 10-1) is displayed.

4. Type 7 into the command area and press the Enter key ↵ . The Network File Transfer Request panel (Figure 10-13) is displayed.

The Network File Transfer Request panel (Figure 10-13) asks you to select the parameters of a file transfer request. To define your file transfer request:

1. Complete the CHOICE column. The following rules apply to your selections:

   - The **FROMNODE** (from node) can be either the LOCAL or REMOTE support processor. The remote support processor is the support processor you are ***now*** logged on to. The local support processor is the support processor at which you are working. If you want to transfer files from the remote support processor to the local support processor, enter REMOTE. If you want to transfer files from the local support processor to the remote support processor, enter LOCAL. If you do not specify the support processor you are taking the file from, the system defaults to REMOTE.

```
PANEL ID:FILXFR              NETWORK FILE TRANSFER REQUEST
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                SYSTEM                    MM/DD/YY HH:MM:SS

PLEASE ENTER YOUR CHOICES FOR THE FOLLOWING PARAMETERS, THEN PRESS ENTER.
POSSIBLE VALUES ARE GIVEN IN PARENTHESES, WITH DEFAULT VALUE FIRST.
IF ANY CHOICE IS NOT SUPPLIED, THE DEFAULT WILL BE USED.
SOURCE AND DESTINATION DEVICES ARE FIXED DISKS AT BOTH NODES

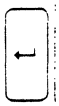
KEYWORD      CHOICE        DESCRIPTION

FROMNODE     _____         NODE WHERE FILE NOW EXISTS (REMOTE, LOCAL)
NAME         _________     PRESENT NAME OF FILE
NEWNAME      _________     NEW NAME OF FILE (DEFAULT SAME AS NAME)
TYPE         _____         TYPE OF FILE (COMMAND, REPORT)


F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------
===>
```

Figure 10-13. Network File Transfer Request Panel

- The **NAME** must be the name for a currently defined command or report file on the FROMNODE.
- The **NEWNAME** must be a filename that is not currently defined on the destination node's fixed disk. A filename can be an alphanumeric text string of 1 to 12 characters.
- The **TYPE** of file you can transfer is either a command or a report file. If you do not specify a TYPE, the default value is command.

2. Press the Enter key  . The file is transferred to the destination node. A system message is sent when the transfer is completed.

Formatting the Fixed Disk or Floppy Diskettes

The FORMAT selection from the File Utilities panel (Figure 10-1) allows you to format the fixed disk or floppy diskette. When formatting a fixed disk, remote support processor users who try to logon will receive a ***disk lockout*** command error message or diskette. Once the fixed disk formatting is completed, logon access is unlocked.

You can only format fixed disks or floppy diskettes if you are logged on to the local support processor.

Formatting destroys all information contained on the fixed disk or floppy diskette. The fixed disk is formatted when it leaves the factory, but may need to be reformatted after a fixed disk failure. Blank floppy diskettes should be formatted so that they can be used later for file backup.

To format the fixed disk or floppy diskettes:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 4 into the command area and press the Enter key ⏎ . The File Utilities panel (Figure 10-1) is displayed.

4. Type 8 into the command area and press the Enter key ⏎ . The File (Disk) Format Request panel (Figure 10-14) is displayed.

```
PANEL ID:FILFMT              FILE (DISK) FORMAT REQUEST
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)      CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                SYSTEM                          MM/DD/YY HH:MM:SS

PLEASE SELECT THE ID OF THE DESIRED COMMAND, THEN PRESS ENTER.

ID          COMMAND     DESCRIPTION

1           DISKETTE    FORMAT BLANK DISKETTE
2           FIXED       FORMAT FIXED DISK ** USE WITH CAUTION **




F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------

===>
```

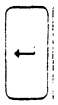
Figure 10-14. File (Disk) Format Request Panel

The File (Disk) Format Request panel (Figure 10-14) asks you to select the parameters of a format request. To define your format request:

1. Complete the CHOICE column. The following rules apply to your selections:

   - The **DISKETTE** parameter lets you format blank floppy diskettes. This prepares the floppy diskette for file backup.

   - The **FIXED** parameter lets you initialize a fixed disk. The PROGRAM diskette must be in the disk drive when you format a DISK. This is a security measure to protect against a user destroying information on the fixed disk. (Formatting destroys all information stored on a fixed disk.)

2. Press the Enter key  . The fixed disk or floppy diskette is formatted.

Mounting/Dismounting Files

The MOUNT selection from the File Utilities panel (Figure 10-1) allows you to coordinate the mounting or dismounting of floppy diskettes with the backup and restore operations. The File Mount/Dismount Diskette panel (Figure 10-15) lets you abort, continue, or format backup and restore operations.

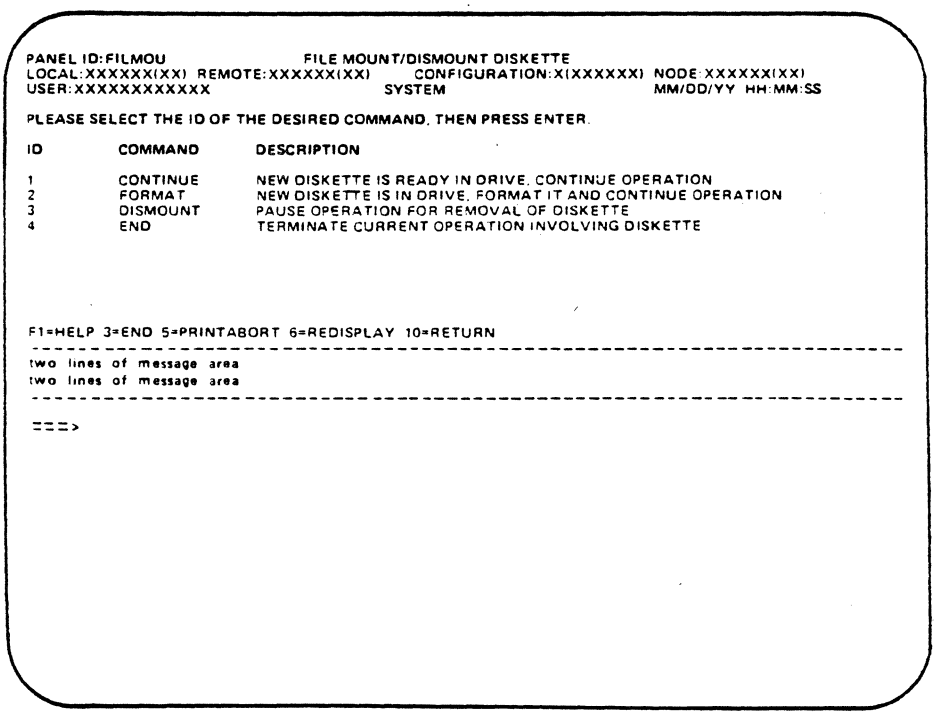
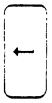


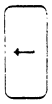
Figure 10-15. File Mount/Dismount Diskette Panel

You can only use the format command when you are logged on to the local support processor.

To select the mount command:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 4 into the command area and press the Enter key  . The File Utilities panel (Figure 10-1) is displayed.

4. Type 9 into the command area and press the Enter key  . The File Mount/Dismount Diskette panel (Figure 10-15) is displayed.

The File Mount/Dismount Diskette panel (Figure 10-15) is selected when the system sends a *MOUNT NEW FLOPPY* message. To define your mount/dismount request:

1. Complete the CHOICE column. The following rules apply to your selections.

- Insert a new floppy diskette before selecting CONTINUE OR FORMAT.

- The **CONTINUE** parameter is used when you are backing up a file and you have run out of space on the floppy diskette. CONTINUE tells the system that new floppy diskette has been inserted and you are ready to continue the backup operation. With CONTINUE, the system continues adding files to the new floppy diskette. Old files are deleted if their name is the same as that of a file that is being backed up onto the floppy diskette.

- The **FORMAT** parameter is also used when you are backing up a file and you have run out of space on the diskette. FORMAT tells the system that a new unformatted floppy diskette has been inserted and you are ready to continue the backup operation. With FORMAT, the new diskette is formatted before the backup operation proceeds.

- The **DISMOUNT** parameter can be entered during a backup operation; it is not applicable to a restore operation. DISMOUNT makes the system pause after completing a file backup and it makes it request a new floppy diskette. If the system has already requested a new floppy diskette, you do not need to dismount; however, if you do dismount it is not harmful.

- The **END** parameter is entered during a backup or restore command. It tells the system to stop the command after the next file is copied (unless a new floppy diskette request was already made), and to terminate the operation.

Chapter 11

Protection Features: The Protection Command

This chapter describes how to use the protection command.

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The Protection Command

The protection command is used to assign operation rights to support processor users. The support processor protection features prevent unauthorized users from performing selected operations.

The protection features are designed to prevent problems caused unintentionally by untrained or partially trained users.

The protection command allows you to:

- Change your own password.
- Add, change, or delete user names, user passwords, and user access rights.
- Change access classes for command and report files.

How the Protection Feature Works

Each user is assigned a user name and a password. Each user name has a specific valid password. Different users may or may not have the same password. To log on, a user must enter his user name and the associated password. If the system does not recognize the user name, or the password is not the user's, logon is denied.

The specific operations that the user can and cannot do after logon are determined by the user's access rights. If a user is denied all access rights, the user can only log off. The user is or is not allowed access to the functions protected by the protection feature, which included all the operations covered in Chapters 5 through 12 of this book. The protection feature also allows assignment of access rights for each command and report file.

Creating and deleting user names and assignment of user passwords and access rights can be performed by any user who has access to the protection user function. When a user name is first created, the user password is PASSWORD and the user is denied all access rights.

The Manager User Name

There is one user name, MANAGER, that cannot be deleted. The MANAGER can perform all support processor functions. The MANAGER's user name or access rights cannot be changed but the MANAGER's password can.

If the MANAGER's password is changed, and if the new password is forgotten, the MANAGER cannot log on. In this case, the only easy way to see the MANAGER's password is if another user has access to the protection user function.

It is therefore necessary that the manager:

- Remembers the MANAGER password or
- Makes sure that at least one other user has access to the protection user function.

File Access Protection

All command and report files are subject to two types of protection:

- Modify protection, which controls who can change the file's contents
- Print/run protection, which controls who can see the file's contents or run the file.

Each command file and report file is assigned a modify protection class and a print/run protection class. The protection classes are a, b, c, d, e, f, g, or *. The modify and print/run protection classes for each file are not necessarily the same.

Each user is allowed or denied access to the a through g protection class. All users are allowed access to the * protection class. In this way, you can select who has modify access and who has print/run access to each command and report file.

Logging On to a Remote Support Processor

When a user logs on to a remote support processor, the user is requesting that the files come from that remote node. The functions the user is allowed to perform are governed by the protection information at the remote node. Certain functions are not permitted in remote logons, regardless of the access that may be permitted if the user logs on locally at the same node. The following commands are prohibited during a remote logon:

- Trigger command
- File commands that require the diskette drive
- Node command.

The Protection Command Main Selection Menu

The protection command is selected from the Support Processor System Functions panel (Figure 4-4), which is described in Chapter 4. To display the protection command main selection menu:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key ↵ . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 5 into the command area and press the Enter key ↵ . The Protection (Security) Control panel (Figure 11-1) is displayed.

```
PANEL ID:PROTEC              PROTECTION (SECURITY) CONTROL
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                SYSTEM                    MM/DD/YY HH:MM:SS

PLEASE SELECT THE ID OF THE DESIRED COMMAND, THEN PRESS ENTER.

ID        COMMAND    DESCRIPTION

1         PASSWORD   CHANGE CURRENT USER'S OWN PASSWORD
2         USER       ADD, CHANGE, OR DELETE USERS AND ACCESS RIGHTS
3         FILE       CHANGE ACCESS CLASSES FOR FILES



F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------

===>
```

Figure 11-1. Protection (Security) Control Panel

The Protection (Security) Control panel (Figure 11-1) gives you the choices described in the following sections.

Changing Your Own Password

The PASSWORD selection from the Protection (Security) Control panel (Figure 11-1) allows you to change your own password.

To change your own password:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key ← . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 5 into the command area and press the Enter key ← . The The Protection (Security) Control panel (Figure 11-1) is displayed.

4. Type 1 into the command area and press the Enter key ← . The Change User Password panel (Figure 11-2) is displayed.

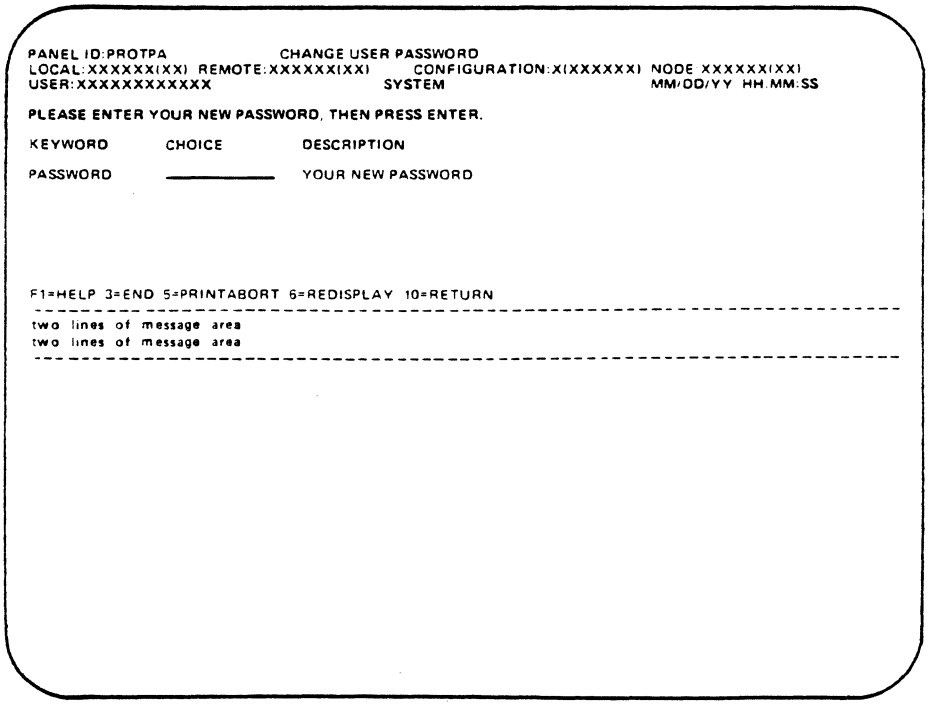


Figure 11-2. Change User Password Panel

The Change User Password panel (Figure 11-2) asks you to select a new password.

To select a new password:

1. Type in the new password. A password can be an alphanumeric text string of 0 to 12 characters. You can select for no password, in which case you would leave the CHOICE column blank.

2. Press the Enter key  . The new password is stored in your user's access definition and the Protection (Security) Control panel (Figure 11-1) is displayed.

Changing User Names, Passwords, and Access Rights

The USER selection from the Protection (Security) Control panel (Figure 11-1) allows you to:

- List all users' names
- Add a user, or change a current user's:

  Password

  Access rights
- Delete a user.

These choices are described in the following sections.

Listing User Names

To list user names:

1. Log on to the support processor. The operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 5 into the command area and press the Enter key ↵ . The Protection (Security) Control panel (Figure 11-1) is displayed.

4. Type 2 into the command area and press the Enter key ↵ . The Protection User Function panel (11-3) is displayed.

5. Type 1 into the command area and press the Enter key ↵ . The Protection Function User List panel (Figure 11-4) is displayed.

```
PANEL ID:PROTUS                    PROTECTION USER FUNCTION
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                   SYSTEM                  MM/DD/YY HH:MM:SS

PLEASE SELECT THE ID OF THE DESIRED COMMAND, THEN PRESS ENTER.

ID        COMMAND     DESCRIPTION

1         LIST        LIST ALL PRESENT USERS
2         ACCESS      ADD USER OR CHANGE A USER'S PASSWORD OR ACCESS PRIVILEGES
3         DELETE      DELETE A USER




F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------

===>
```

Figure 11-3. Protection User Function Panel

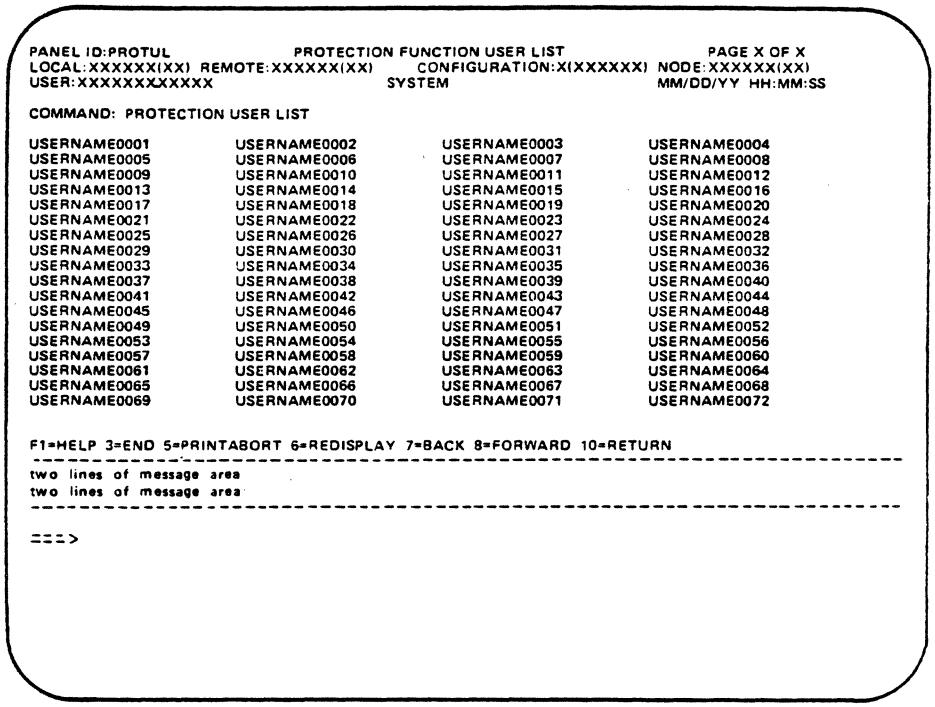


Figure 11-4. Protection Function User List Panel

The Protection Function User List panel (Figure 11-4) provides a list of all the user names. If there are more USER names than can fit on one panel, a multi-page format is used.

To exit this panel, press function key F3 (END). The screen returns to the Protection User Function panel (Figure 11-3).

Adding Users and Changing User Access Rights

To add users or change user access rights:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key ← . The Support Processor System Functions panel (Figure 4-4) is displayed.

The following keys, which are described in Chapter 2, can be helpful to you in creating and editing command files:

- PgUp and PgDn
- Backspace key
- Home key
- Cursor control keys.

The Del and Ins keys are also available during an edit file session. These keys can be used to delete, insert, and move text in a command file. The procedures for this are described later in this chapter.

Edit File Function Keys

Function keys F1 through F10 are reassigned functions during an edit file. Function keys F1 through F4 take on a new function, and function keys F5 through F10 are deleted as options. The functions of F1 through F4 are as follows.

- F1 (UPDATE file name) ends edit file and saves the information on the Edit Command File panel (Figure 6-2).
- F2 (SAVE UNDER NEW NAME) allows you to save the data of the edited command file in a command file of a new name. The command file selected for edit is left unchanged.
- F3 (ABORT) ends edit file and discards the information on the Edit a Command File panel (Figure 6-2).
- F4 (FIND) allows you to find a text string in the command file.

Each of these keys is covered in more detail in the following sections, where the operations they initiate are described.

Finding Text Within Command Files

Function key F4 (FIND) allows you to find text within the command file being edited or created.

To find text:

1. Press function key F4 and then the Enter key [←] . The bottom two lines of the panel appear as shown in Figure 6-3.

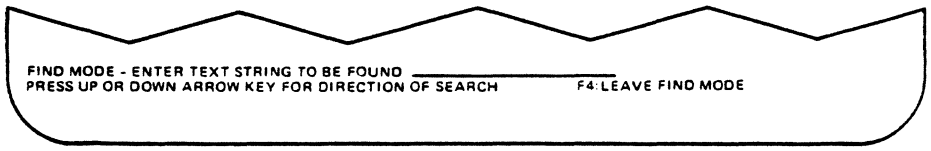


Figure 6-3. Finding Text Within the Command File

2. Type, after FOUND, any text string of from 1 to 20 characters. The text cannot contain an enter command (carriage return).

3. Press the up [8 ↑] or down [2 ↓] cursor control key to cause a search toward the beginning or end of the command file. You can search in one direction and then the other. If the text is found, the cursor stops on the first character of the text string. If you press the up [8 ↑] or down [2 ↓] cursor control key again, the cursor searches for another appearance of the text in the file.

If needed, you can type over your text selection and search for another text string.

4. To exit find mode, press function key F4 and then press the Enter key [←] . The panel will appear as it was before the find mode.

Deleting Text Within Command Files

The Del key allows you to delete text within a command file. The Del key can also be used to store text in a temporary buffer. Text stored in the temporary buffer can be moved elsewhere in the command file with the Ins key.

To delete, or delete and save text:

1. Position the cursor under the first character of the text to be deleted.

2. Press the Del key. The bottom two lines of the panel appear as shown in Figure 6-4.

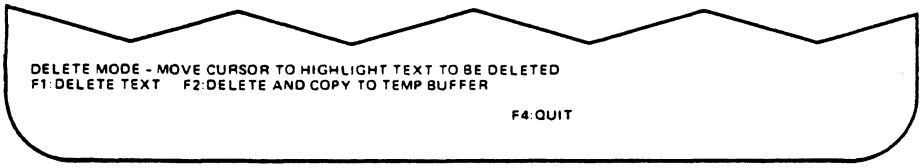


Figure 6-4. Deleting Text Within the Command File

3. Use the cursor control keys (up, down, left, right) to move the cursor over the text to be deleted. Characters between the cursor and the original position of the cursor are highlighted. Highlight all characters you want deleted.

   Note: To delete an entire line, highlight the line, and move the cursor above or below the line.

4. You have two choices for delete:

   - Delete and discard
   - Delete and copy to temporary buffer.

Press function key F1 and press the Enter key ← to delete and discard the highlighted text. The highlighted text is deleted and the panel appears, without the deleted text, as it was before the delete mode.

Press the function key F2 and press the Enter key ← to delete highlighted text. The highlighted text is deleted and stored in the temporary buffer. The screen displays, without the deleted text, as it was before the delete mode.

You can reenter the delete mode, delete more text, or change the text in the temporary buffer. The temporary buffer only stores the information from one delete. Each time you store information in the temporary buffer, any information already stored is discarded.

Inserting Text Within the Command File

The Ins key allows you to insert text within a command file. You can insert new text or text that you saved in the temporary buffer with the Del key.

To insert text within a command file:

1. Position the cursor to the position where you want to insert the text.

2. Press the Ins key. The bottom two lines of the panel appear as shown in Figure 6-5.

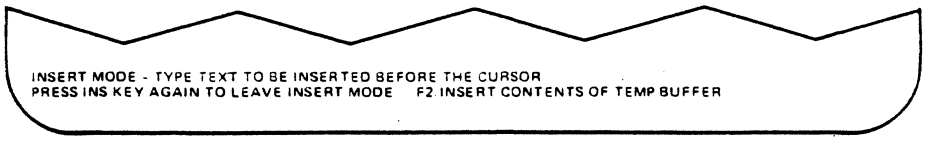


Figure 6-5. Insertion of Text Into a Command File

3. You have two choices for insert:

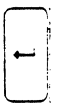
- Insert new text

- Insert text that you stored in the temporary buffer during a delete.

If you are inserting new text:

a. Type the text into the command file. All characters are placed before the cursor. You cannot move the cursor during an insert.

b. Press the Ins key. The new characters are inserted and the panel appears, with the additional characters, as it was before insert mode.

If you are inserting text that you stored in the temporary buffer, press function key F2 and press the Enter key  . All characters added to the temporary buffer from the last delete operation are inserted before the cursor. The panel appears, with the additional characters, as it was before insert mode.

Function key F2 can be used repeatedly to insert the contents of the temporary buffer in different places in the command file. (Inserting the contents of the temporary buffer does not clear the temporary buffer.) This would be a convenient approach to entering repetitive data into command files.

Ending an Edit File

An edit file is ended with the function key F1, F2, or F3. The three keys give you a choice to end the edit file, and either:

- Update and save the information entered during the edit file under the same or old file name (function key F1).
- Save the information entered during the edit file under a new file name (function key F2).
- Discard the information entered during the edit file session (function key F3).

These three choices are described in the following sections.

> **Note:** If you are logged on to a remote support procesor with which communication is lost during the edit file session, pressing function key F1 (UPDATE file name) or F2 (SAVE UNDER NEW NAME) clears the panel and displays the message:
>
> **COMMUNICATION HAS BEEN LOST WITH THE NODE WHERE YOU LOGGED ON. YOUR FILE HAS NOT BEEN-LOST---IT-MAY-BE-SAVED-ON-THE-LOCAL---DISK.---AFTER YOU HAVE CHOSEN THE ACTION TO BE TAKEN WITH THE RESULTS OF YOUR EDIT SESSION, YOU MUST LOG ON TO ANOTHER NODE BEFORE DOING ANY FURTHER WORK. REMEMBER THAT THE NODE WHERE YOU LOGGED ON HAS THE ORIGINAL-VERSION-OF-THE-FILE-YOU-ARE-EDITING, + AND-YOUR-- NEW---VERSION WILL BE ON THE LOCAL DISK, IF YOU DECIDE TO SAVE IT.**

If this occurs, the function key assignment is again different. The function of each key is as follows.

- F1 (SAVE FILE file name) saves the file, under the same name, at the local support processor. If a file by that name already exists, the F1 choice is not available and is not displayed.
- F2 (SAVE UNDER NEW NAME) saves the file under a new file name. The procedure is the same as when communication is not lost, except the file is saved at the local support processor.
- F3 (ABORT) discards the information entered during the edit file.
- F4 (QUIT) returns you to the edit file session.

Ending an Edit File: Saving the Edit File Information Under the Same File Name

To save the information entered during the edit file session press function key F1 (UPDATE file name) and press the Enter key ↵. The file is saved under the name you specified in the function key area when you started the session.

Ending an Edit File: Saving Edit File Information under a New File Name

To save both your altered command file and your original command file unchanged, use this choice.

To save the information entered during the edit file session:

1. Press function key F2 (SAVE UNDER NEW NAME) and press the Enter key ↵. The bottom line of the panel appears as shown in Figure 6-6.

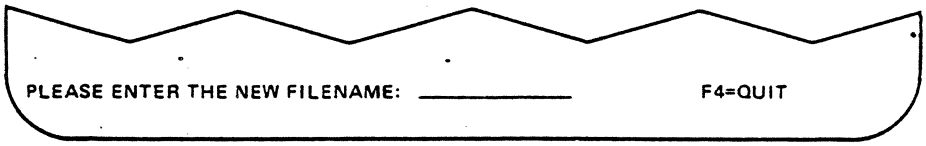


Figure 6-6. Creating a New File Name

2. Type the new file name. Press function key F4 if you decide that you do not want to save the edit file under a new file name.

3. Press the Enter key ↵. The command file just displayed in the edit file is saved under the selected file name. The command file originally selected from the Edit a Command File panel (Figure 6-1) is saved exactly as it was before the edit file.

Ending an Edit File: Discarding Edit File Information

To cancel the information entered during the edit file, press function key F3 (ABORT) and press the Enter key ↵. If you originally chose to create a new file, the file is not created; any changes made to an existing file are discarded.

Chapter 7

3727 Emulation

This chapter describes how to use the support processor to emulate the IBM 3727 Operators Console.

Contents

Introduction 7-1
Description of 3727 Emulation 7-1
Support Processor Characteristics During 3727 Emulation 7-2
3727 Emulation Procedure 7-4

Introduction

The IBM 3727 Operators Console (hereafter referred to as the 3727) is the keyboard and CRT from which the IBM 3725 Communication Controller (hereafter referred to as the 3725) is operated. In 3727 emulation, the 3725 is controlled and operated by the support processor as if the support processor were a 3727.

Description of 3727 Emulation

Any support processor in the Matrix Switch network can be set up for 3727 emulation. The only limitation is that one support processor in the network must be local to the 3725. Any support processor in the network can perform 3727 emulation by using the emulation software of the support processor local to the 3725. Each support processor has primary and secondary asynchronous communication adapters (ACA). The primary ACA is used to connect the support processor to the network control interface channel (NCIC) of the Matrix Switch network. The secondary ACA is used to connect the support processor to the 3725. Normally, a support processor's secondary ACA is connected to a 3725 through a Matrix Switch EIA port. Figure 7-1 shows the connections between a local and remote support processor and a local and remote 3725.

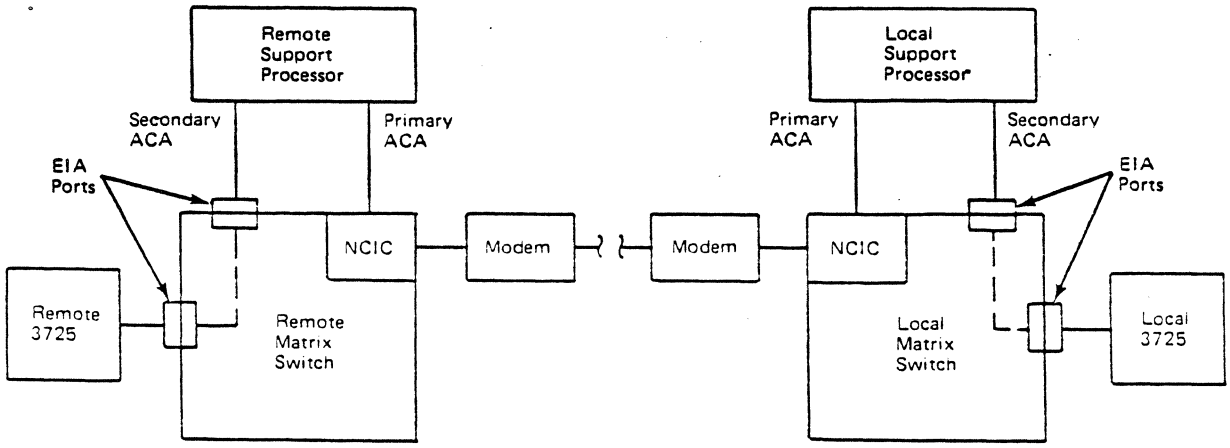


Figure 7-1. Support Processor Connections for Local and Remote Emulation

Note: In the following descriptions:

1. The local support processor is local to the 3725.

2. The remote support processor is located remotely from the 3725.

In a support processor **local** to the 3725, 3727 emulation is accomplished when:

1. The local support processor requests, over the primary ACA, that the Matrix Switch network connect its secondary ACA to the 3725 port.

2. The secondary ACA is connected, and characters are passed between the support processor and 3725 over the secondary ACA.

In a support processor **remote** to the 3725, emulation is accomplished when:

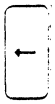
1. The remote support processor requests, over the primary ACA, that the Matrix Switch network connect the secondary ACA of a local support processor to the 3725.

2. The secondary ACA is connected, and characters are passed between the local support processor and the 3725 over the secondary ACA. Characters are passed between the two support processors over the primary ACA. The use of the support processor local to the 3725 is not tied up, but it cannot be used for other 3727 emulations.

Support Processor Characteristics During 3727 Emulation

Support Processor Key Functions

During 3727 emulation, some support processor keys take on a new function. Figure 7-2 shows the support processor keyboard with the lower portion of the keys shaded and showing their function during emulation. Keys that are not shaded maintain the same function with the following exceptions:

- The **Enter** key  only serves to move the cursor to the beginning of a new line. It is ***not*** used to enter data. (Entering data is accomplished with the + (plus) key, which in emulation is the same as the 3727 SEND key.)

- The **cursor control keys** (up, down, right, left) can be used.

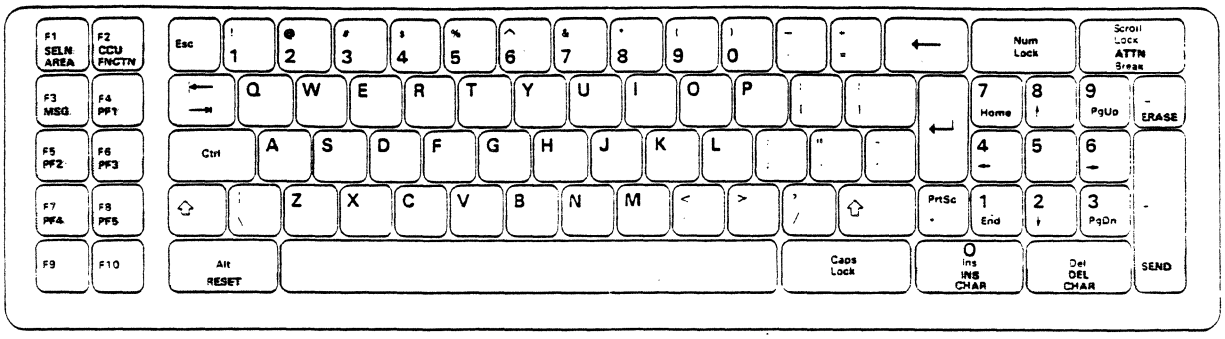


Figure 7-2. Keyboard Functions During 3727 Emulation

Equivalent support processor key assignments during 3727 emulation are as follows.

3727 Key	Equivalent Support Processor
SELN AREA	F1
CCU FNCTN	F2
MSG	F3
PF1	F4
PF2	F5
PF3	F6
PF4	F7
PF5	F8
ATTN	Scroll Lock
ERASE	- (Minus)
INS CHAR	Ins
DEL CHAR	Del
SEND	+ (plus)
New Line	Enter ←
RESET	Alt

In addition to the reassignment of the support processor key functions, pressing certain keys at the same time has a special function during emulation. These keyboard entries and the resulting action are as follows.

Keyboard Entry	Action
Ctrl-Esc	Leave emulation mode
Ctrl-Alt-Del	Reset (Simulate power-on)

3727 Emulation Procedure

3727 emulation is selected from the Operating Mode Selection panel, which is described in Chapter 4. To perform 3727 emulation:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) until the Operation Mode Selection panel is displayed.

2. Type 1 into the command area and press the Enter key ↵.

The Emulation Setup panel (Figure 7-3) is displayed.

```
PANEL ID:MOSS                          EMULATION SETUP
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)   CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXXX                        MOSS                  MM/DD/YY HH:MM:SS

PLEASE ENTER THE NAME OF A COMMAND FILE WHICH WILL MAKE THE PROPER CONNECTIONS.

KEYWORD    CHOICE          DESCRIPTION

FILENAME   ________        COMMAND FILE TO BE RUN TO MAKE REQUIRED CONNECTIONS


ONCE YOU HAVE ENTERED EMULATION MODE, YOU MAY LEAVE BY PRESSING CTRL-ESC.



F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 7=BACK 8=FORWARD 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------
===>
```

Figure 7-3. Emulation Setup Panel

This panel asks you to enter the name of a command file that contains instructions to enter 3727 emulation. The selected command file normally contains:

- The assign emulator pseudo command. This assigns the secondary ACA of a selected support processor to the emulation.
- Matrix Switch commands that connect (through the Matrix Switch) the secondary ACA of the selected support processor to the 3725.
- The emulate 3727 pseudo command. This passes control to the emulation software in the selected support processor.

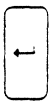
Notes:

1. For information on pseudo commands and creating command files, refer to Chapter 6.

2. Examples of command files that allow you to enter 3727 emulation are given in Appendix D.

To enter a command file and operate in 3727 emulation mode:

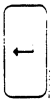
1. Type the name of a command file into the CHOICE column. If you want to see a list of command file names, press function key F1 (HELP).

2. Press the Enter key  . The selected command file is run in the same way a command file is screen run. (Screen runs are described in Chapter 8.) If the selected support processor is already in emulator mode or turned off, the assign emulator command is rejected and the Emulation Setup panel (Figure 7-3) is redisplayed. If the command file runs successfully, the support processor screen and keyboard emulate the 3727 screen and keyboard.

Refer to the *IBM 3725 Communication Control Operating Guide*, GA33-0014, for details of 3727 operation.

Note: In 3727 emulation:

1. The function of some of the support processor keys is different than their function during other support processor operations. Refer to "Support Processor Characteristics During 3727 Emulation" in this chapter for key function assignments. The template in the back of this book contains self-adhering overlays to identify the functions of those key buttons used during 3727 emulation. Attach each overlay to the appropriate key button on the support processor keyboard.

2. The **Enter key**  is used to bring the cursor to a new line, but is not used to enter data. To enter data, use the + (plus) key. This key is the same as the 3727 SEND key.

3. The message **MSG 3728** on the right side of line 25 means a critical (red) message is in the support processor queue. If this message is displayed, you should exit 3727 emulation (as described in step 3) and acknowledge ***all*** messages.

4. To end a 3727 emulation, press and hold the Ctrl key and then press the Esc key. The support processor displays the Emulation Setup panel (Figure 7-3). To return to the Operating Mode Selection panel, press function key F10 (RETURN) again.

5. When running remote 3727 emulation, the response time is considerably greater than running locally. This is because each transmission from the 3725 is processed by the local support processor, the remote support processor, and each of the switches between the remote and the local support processors.

The refresh of the screen and the response to user input will take longer. For example, response to the user entering the ATTN key may take up to 55 seconds. Be patient.

6. The support processor will not display Line Check if the communication is lost between the FELSWCH and the PC-XT during a 3727 emulation function.

7. A blank display occurs if the PC-XT cannot communicate with the FELSWCH at the start of a 3727 emulation function.

Chapter 8

Running Command Files: The Run Command

This chapter describes how and when to use the run command.

Contents

How to Use the Run Command 8-1
The Run Command Main Selection Menu 8-1
How to Screen Run a Command File 8-4
How to Batch Run a Command File 8-7

How to Use the Run Command

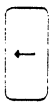
The run command is used to execute the command files created with the editfile command. For information about command files and creating them, refer to Chapter 6.

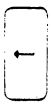
When a command file is run, each of its commands are executed one at a time. The run command only allows you to select a command file, and run it. It does not allow you to automatically run command files in response to predefined events. This is done with the trigger command, which is covered in Chapter 9.

The Run Command Main Selection Menu

The run command is selected from the Support Processor System Functions panel, which is described in Chapter 4. To display the run command main selection menu:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 1 into the command area and press the Enter key  . The Run a Command File panel (Figure 8-1) is displayed.

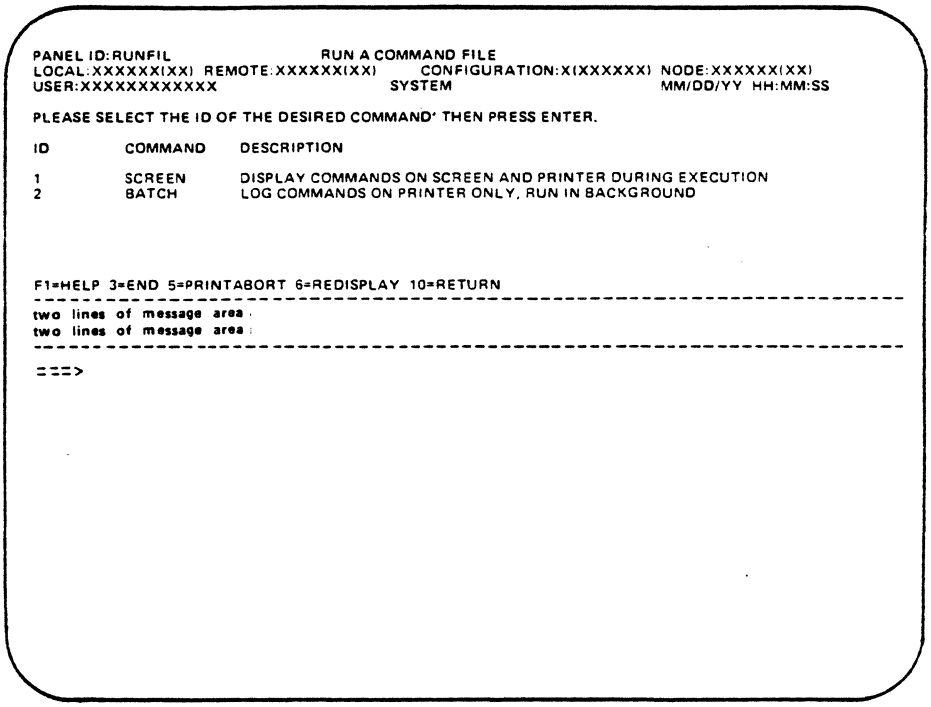


Figure 8-1. Run a Command File Panel

This panel gives you a choice between a **screen run** and a **batch run**, which are described in the following sections.

The Screen Run

In a screen run:

- Each command is scrolled onto the screen as it is executed. The commands are displayed on the part of the panel that normally shows selection options and selection instructions.
- The support processor is not available for any use other than watching the progress of the command file run, responding to the command file, and ending the run.
- The command file runs with the same select and edit parameters that are in effect as a result of any of the following previous operations:

  Command file screen run

  Command file trigger run

  Direct switch control console control session.

It is possible to screen run a command file that contains no select or edit commands. In this case, the command file runs under the existing select and edit conditions. Before the screen run, you could go into direct switch control console control, check the select and edit conditions, and change them as necessary. Otherwise, the select and edit conditions can be a part of the command file you want to run. However the select and edit conditions are set up for a screen run, those conditions remain in effect for later screen runs, trigger runs, and direct switch control console control sessions.

> **Note:** Select and edit are commands that are covered in the *IBM 3728 Communication Control Matrix Switch Operations Guide*, GA27-3643.

- All commands, whether they execute sucessfully or not, and any error messages, are entered in the log file and printed. Commands printed are identified as SRUN, as shown in the following example.

  12:30:59 C123 SRUN > SEL M = PGM

  In this case, **12:30:59** is the time the command executed; **C** identifies the printout as a command; **123** is the command sequence number; **SRUN** identifies the command as being from a screen run; and **SEL M = PGM** is the command itself.

- Command errors are printed and displayed on the panel.

- The run can be aborted by pressing function key F3 (END).

The Batch Run

In a batch run:

- The commands from the command file being run are not shown on the screen.

- The support processor is free to accept other commands.

- The command file must contain its own select and edit conditions. The current select and edit conditions set up in earlier screen runs, trigger runs, and direct switch control console control sessions are *not* relevant to a batch run. Command files that are batch run are executed in the background of other support processor operations. The select and edit conditions in a batch run apply only to the command file in which they are set up. They have no effect on later screen runs, trigger runs, batch runs, and direct switch control console control. Default values are given to any select and edit conditions not defined in a command file that is batch run.

  > **Note:** Select and edit are commands that are covered in the *IBM 3728 Communication Control Matrix Switch Operations Guide*, GA27-3643.

- All commands, whether they execute successfully or not, and any error messages, are entered in the log file and printed. Commands printed are identified as BRUN, as shown in the following example.

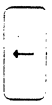
  12:30:59 C123 BRUN > SEL M = PGM

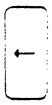
  In this case, **12:30:59** is the time the command executed or was found to be incorrect; **C** identifies the printout as a command; **123** is the command sequence number; **BRUN** identifies the command as being from a batch run; and **SEL M = PGM** is the command itself.

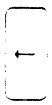
How to Screen Run a Command File

The SCREEN selection from the Run a Command File panel (Figure 8-1) allows you to select and screen run a command file. To screen run a command file:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 1 into the command area and press the Enter key  . The run a Command File panel (Figure 8-1) is displayed.

4. Type 1 into the command area and press the Enter key  . The Screen Run File Selection panel (Figure 8-2) is displayed.

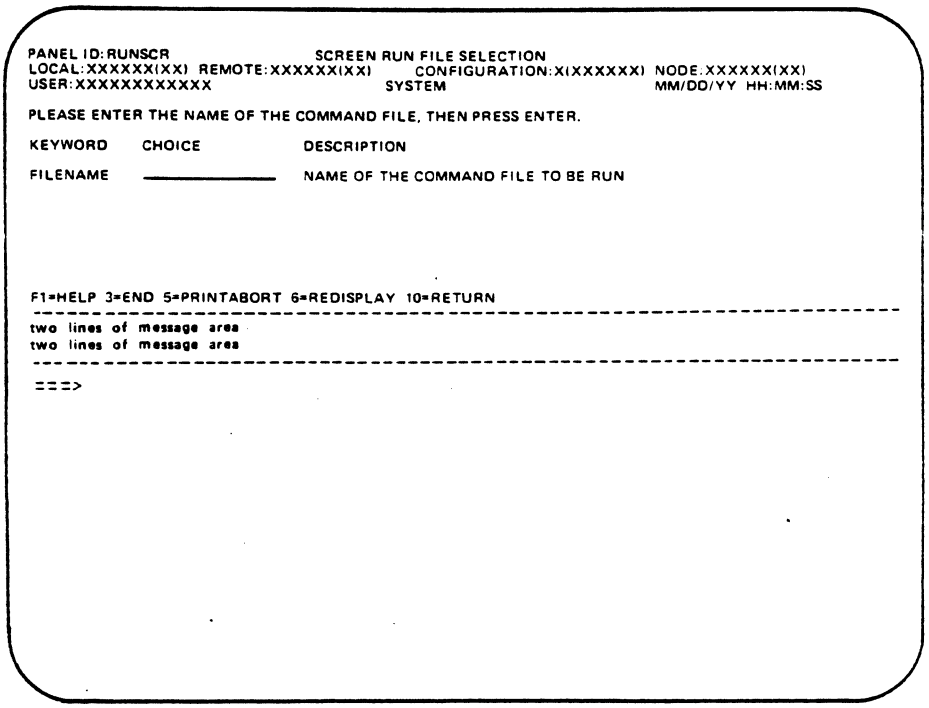


Figure 8-2. Screen Run File Selection Panel

This panel asks you to enter the name of the command file you want to screen run. To enter a command file name:

1. Type in the CHOICE column the command file name you want to run.

   Note: If you want to see a list of currently defined command files, press function key F1 (HELP).

2. Press the Enter key ↵ . If the command file name is valid, the screen displays the Screen Run File Execution panel (Figure 8-3), and the selected command file is executed by the support processor.

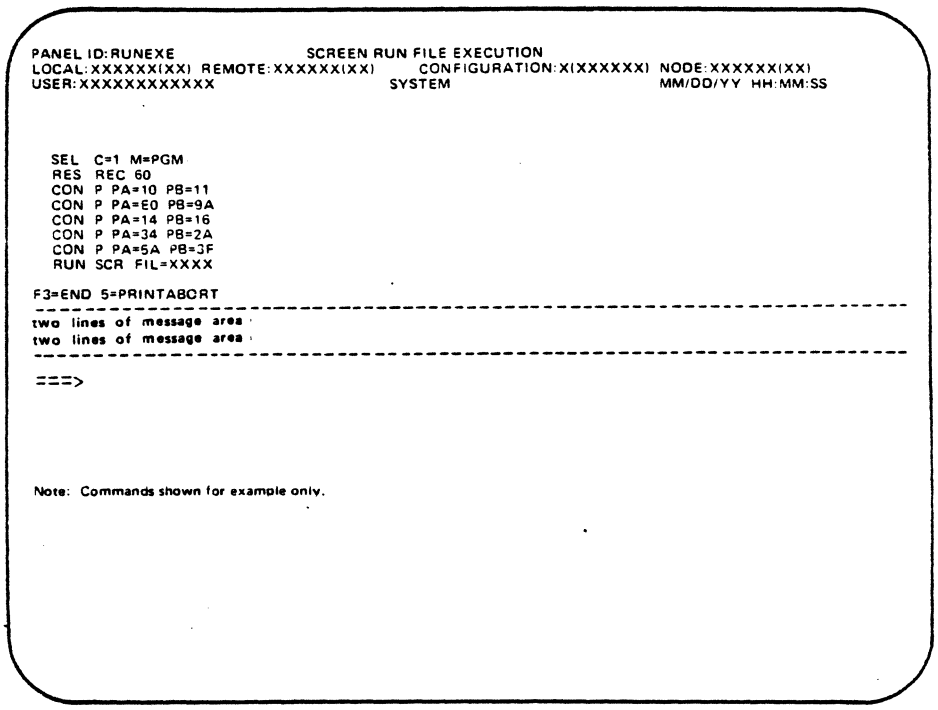


Figure 8-3. Screen run File Execution Panel

The commands scroll from the bottom to the top of the area of the panel normally used for command and parameter selection. When more than eight lines of commands are displayed, the top command scrolls off the panel to make room for a command to move up into the bottom-most position.

While the screen run is executing:

- To stop the run, press function key F3 (END). Control is returned to the Screen Run File Selection panel (Figure 8-2).
- To temporarily stop the run, press the Scroll Lock key. The commands stop scrolling and execution stops. To restart the execution, press the Scroll Lock key a second time.
- If command lines, such as the input pseudo command, require operator response, the operator is prompted by such commands as they occur. Any other entries, except for using the Enter key ↵ to acknowledge messages, are not allowed.

The screen run ends when:

- Function key F3 (END) is pressed
- The entire command file has been run
- A pseudo command error is encountered
- A switch control console command error is encountered. A switch control console command error only ends a screen run if the command file contains the pseudo command *ERROR ABORT.

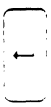
When the screen run ends, control is returned to the Screen Run File Selection panel (Figure 8-2).

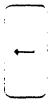
How to Batch Run a Command File

The BATCH selection from the Run a Command File panel (Figure 8-1) allows you to select and batch run a command file. To batch run a command file:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 1 into the command area and press the Enter key  . The Run a Command File panel (Figure 8-1) is displayed.

4. Type 2 into the command area and press the Enter key  . The Batch Run File Selection panel (Figure 8-4) is displayed.

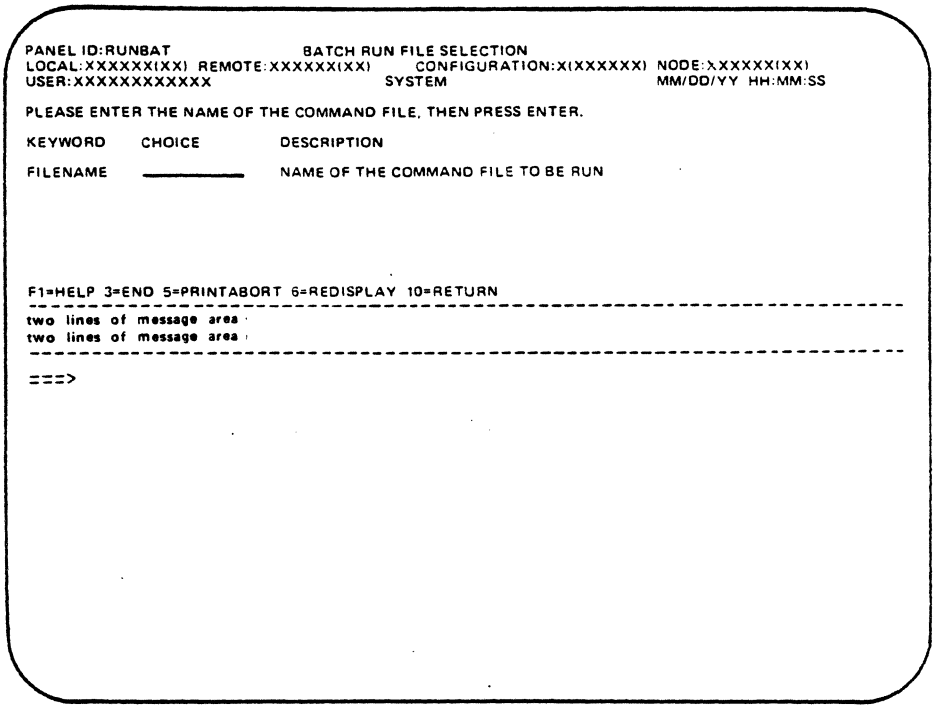


Figure 8-4. Batch Run File Selection Panel

This panel asks you to enter the name of the command file you want to batch run. To enter a command file name:

1. Type in the CHOICE column the command file name you want to run.

   Note: If you want to see a list of currently defined command files, press function key F1 (HELP).

2. Press the Enter key ↵ . If the command file name is valid, the command file is placed in a queue for execution. After the command file is placed in a queue, control is returned to the Batch Run File Selection panel (Figure 8-4). When the execution of the batch run starts, the message **BRUN EXECUTING COMMAND FILE (XXXXXX)** is displayed.

   Note: The command file queue length is limited by the disk space available. If the queue length is exceeded, the command file will not run.

Chapter 9

Triggering Command Files: The Trigger Command

This chapter describes when and how to use the trigger command.

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Defining Event-Driven Trigger Conditions 9-4
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How to Use the Trigger Command

The trigger command is used to trigger the command files created with the editfile command. For information about command files and creating command files, refer to Chapter 6.

When a command file is triggered, each of its commands is executed one at a time.

Command files are triggered automatically, once you set up the conditions under which a trigger can occur. When the triggering conditions occur, the specified command file is placed in a command file queue for execution.

> **Note:** The command file queue length is limited by the disk space available. If the queue length is exceeded, the command file cannot be placed in a queue, and the command file will not be triggered.

A command file can be triggered:

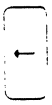
- On a schedule, based on the support processor's clock
- When an event occurs, based on the support processor's receipt of an event report
- When a group of events occurs at the same time, based on the support processor's receipt of a group of event reports.

The trigger command also allows you to list and delete all trigger conditions.

The Trigger Command Main Selection Menu

The trigger command is selected from the Support Processor System Functions panel (Figure 4-4). This panel is described in Chapter 4. To display the trigger command main selection menu:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 2 into the command area and press the Enter key  . The Trigger Function panel (Figure 9-1) is displayed.

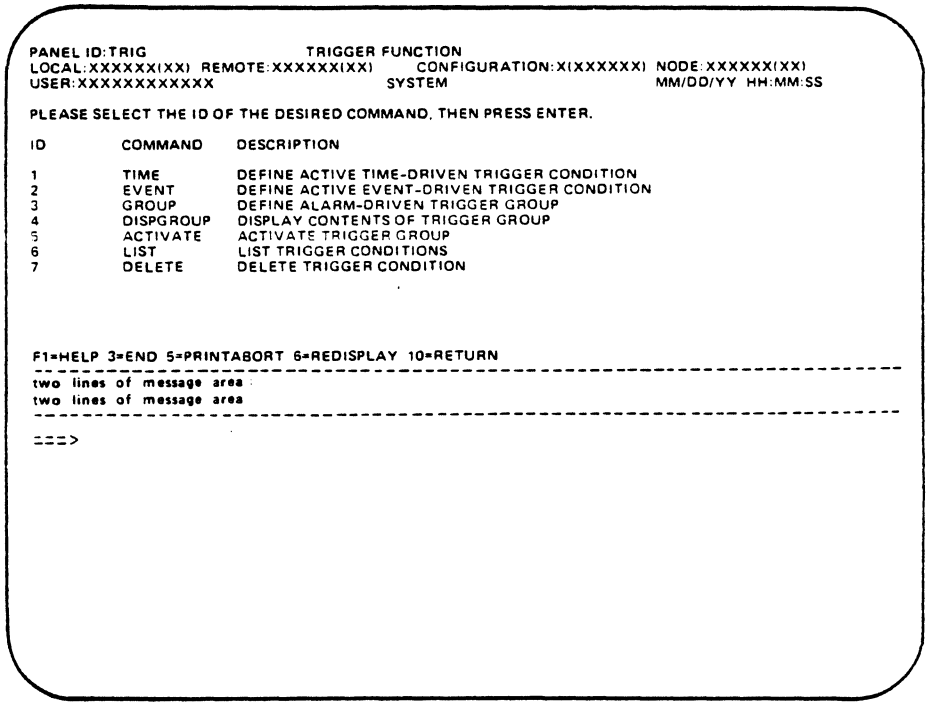


Figure 9-1. Trigger Function Panel

This panel gives you the main selections of the trigger command, which are described in the following sections.

Defining Time-Driven Trigger Conditions

The TIME selection from the trigger function panel (Figure 9-1) allows you to select a command file that triggers at a chosen time, and re-triggers at a chosen interval. Up to 10 time-driven triggers can be in effect at any time.

To define a time-driven trigger condition:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key ↵ . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 2 into the command area and press the Enter key ↵ . The Trigger Function panel (Figure 9-1) is displayed.

4. Type 1 into the command area and press the Enter key ↵ . The Define Time-Driven Trigger Conditions panel (Figure 9-2) is displayed.

```
PANEL ID:TRTIME          DEFINE TIME-DRIVEN TRIGGER CONDITIONS
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXXX                SYSTEM                  MM/DD/YY HH:MM:SS

PLEASE ENTER PARAMETERS FOR THE NEW TIME-DRIVEN TRIGGER CONDITION,
THEN PRESS ENTER.

KEYWORD      CHOICE          DESCRIPTION

TCNAME       ____________    TRIGGER CONDITION NAME
DATESTART    ____________    START DATE OF TRIGGER (MM/DD/YY)
TIMESTART    ________        START TIME OF TRIGGER (HH:MM:SS)
EXECUTIONS   __              TOTAL NUMBER OF EXECUTIONS (* FOR UNLIMITED)
INTERVAL     ________        TIME BETWEEN EXECUTIONS (HHH:MM)
FILENAME     ____________    COMMAND FILE TO BE EXECUTED AT THESE TIMES


F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------

===>
```

Figure 9-2. Define Time-Driven Trigger Conditions Panel

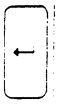
The Define Time-Driven Trigger Conditions panel asks you to select the parameters of a time-driven trigger. To define a time-driven trigger:

1. Complete the CHOICE column of the Define Time-Driven Trigger Conditions panel. The following rules apply to your selections:

- The **TCNAME** (trigger condition name) must be a currently undefined trigger condition name. The TCNAME can be an alphanumeric text string of 1 to 12 characters.

- The **FILENAME** must be the name of a currently defined command file.

- You can choose unlimited (*) for **executions** which means the time-driven trigger will never automatically be deleted.
- The **DATESTART** and **TIMESTART** parameters are put into effect based on the time and date as shown on the support processor panel headers.

2. Press the Enter key  . The resulting time trigger is entered into the list of active triggers. The command file specified by FILENAME is triggered when the support processor's clock matches the chosen time and date, and at the specified interval thereafter.

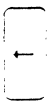
Time-driven triggers are deleted using the Trigger Function panel (Figure 9-1) DELETE command. If the total number of executions is specified, the time trigger is automatically deleted after its final execution.

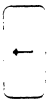
Defining Event-Driven Trigger Conditions

How Event-Driven Triggers Operate

The EVENT selection from the Trigger Function panel (Figure 9-1) allows you to select a command file that triggers when a chosen event occurs. To set up an event-driven trigger:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 2 into the command area and press the Enter key  . The Trigger Function panel (Figure 9-1) is displayed.

4. Type 2 into the command area and press the Enter key ↵ . The Event-Driven Trigger Condition panel (Figure 9-3) is displayed.

```
PANEL ID:TREVNT              EVENT-DRIVEN-TRIGGER CONDITION
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)     CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXXX                SYSTEM                    MM/DD/YY HH:MM:SS

PLEASE SELECT THE ID OF THE DESIRED TYPE OF SYSTEM MESSAGE, THEN PRESS ENTER.

ID          COMMAND     DESCRIPTION

1           ALARM       USER-DEFINED ALARM ON PORT SIGNAL LEVELS
2           CARDON      PORT CARD ON-LINE
3           CARDOFF     PORT CARD OFF-LINE



F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------
 ===>
```

Figure 9-3. Event-Driven Trigger Condition Panel

The Event-Driven Trigger Condition panel provides a choice among three different types of events: ALARM, CARDON, and CARDOFF. Each event can be set up to trigger a command file. The support processor knows of the occurrence of an event through the receipt of event reports. The events that can trigger a command file and their corresponding event reports are:

Alarm occurs on signal level (ALARM)	PORT *aaaaaa(aaa)* ALARM#*b* (*ccc*)(*aaaaaa(aaa)* is the port name and number; **B** is the alarm number [0 or 1]; and **ccc** is the signal name)
Port card goes online (CARDON)	**PORT CARD x ON-LINE** (**x** is the port card)
Port card goes offline (CARDOFF)	**PORT CARD x OFF-LINE** (**x** is the port card)

Note: These event reports are produced in a Matrix Switch and sent to the support processor. If you are not familiar with event reports, event report destinations, and alarming ports, refer to the *IBM 3728 Communication Control Matrix Switch Operations Guide*, GA27-3643.

The only way an event can trigger a command file is if its corresponding event report is sent to the support processor. It is therefore necessary that the event reports that are to act as triggers reach your support processor. Event reports are distributed in a network through the assignment of event report destinations. Chapter 3 describes how to have event reports sent to the support processor.

When you set up each event-driven trigger, you specify the parameters of an event report and of an associated command file. The support processor then looks for a match between the parameters you select and the parameters contained in the incoming event reports. If a complete match is found between the two, the associated command file is triggered.

Flexibility In Event-Driven Triggers

Up to 100 event-driven triggers can be defined at one time. The support processor provides two features that allow for flexibility in creating event-driven triggers and their command files.

- In setting up a trigger condition you do not have to specify exact parameters. In this way you can set up a trigger condition that responds to any number of events, not only one specific event. To set up a signal alarm trigger, you are asked to specify:

  FELSWCH name or number (or **any** FELSWCH)

  Port name or number (or **any** port)

  Signal name (or **any** signal)

  Alarm number (or **any** alarm).

To set a card online or card offline trigger, you are asked to specify:

FELSWCH name or number (or **any** FELSWCH)

Card number (or **any** card).

Selecting an **any** option allows the support processor to ignore that parameter value in the event reports and to accept any value for that parameter as a match. Therefore, a greater number of event reports can qualify as a match to the trigger condition.

For example, you can have a command file that triggers if any card in a selected switch goes offline. In this case, a single trigger condition responds to as many events as there are cards in the selected switch.

- Parameter information can be passed from an event report into the command file that triggers from that event report. This is done by including parameters [P1] through [P4] in the command files. [P1] through [P4] have a special meaning when used in event-triggered files. They take information from the event reports and substitute it into the command file. In this way, different parameters can be used in a single command file each time it is triggered.

How to use [P1] through [P4] is described in detail in "Automatic Assignment of Parameters [P1] through [P4] " in Chapter 6.

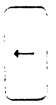
Setting Up Signal Alarm Triggers

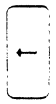
The ALARM selection from the Event-Driven Trigger Condition panel (Figure 9-3) allows you to create a signal alarm trigger. To create a signal alarm trigger:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 2 into the command area and press the Enter key  . The Trigger Function panel (Figure 9-1) is displayed.

4. Type 2 into the command area and press the Enter key  . The Event-Driven Trigger Condition panel (Figure 9-3) is displayed.

5. Type 1 into the command area and press the Enter key  . The Trigger on Alarm Message panel (Figure 9-4) is displayed.

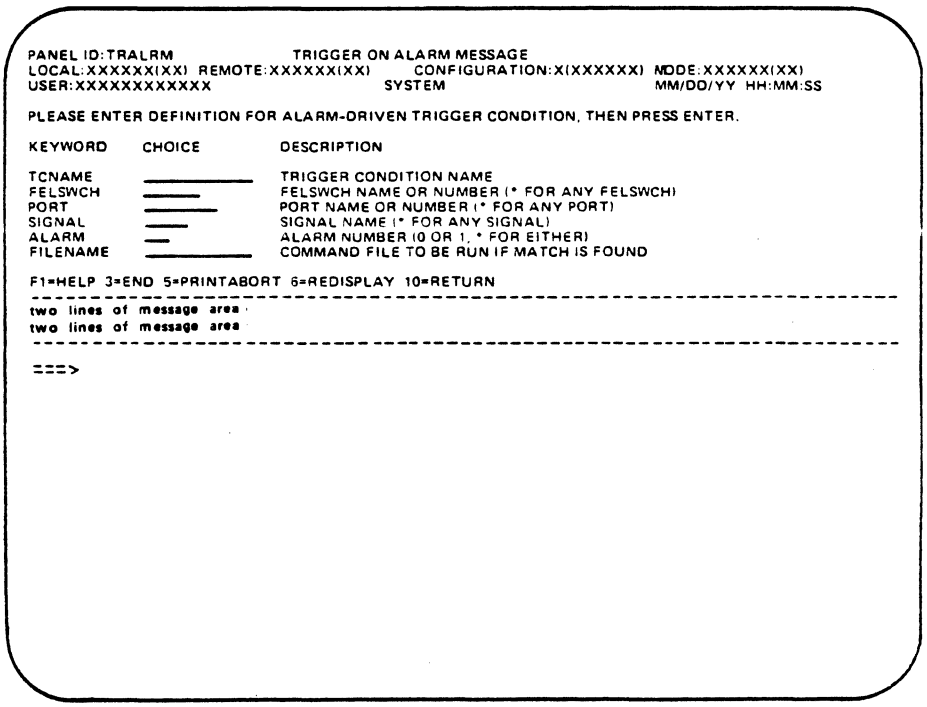


Figure 9-4. Trigger On Alarm Message Panel

This panel asks you to select the parameters of a signal alarm trigger. To define a signal alarm trigger:

1. Complete the CHOICE column of the Trigger on Alarm Message panel (Figure 9-4). The following rules apply to your selections.

- The **TCNAME** (trigger condition name) is a user-defined name that is not already in use as another trigger condition name. The TCNAME can be an alphanumeric text string of 1 to 12 characters.

- The **FILENAME** must be the name of a currently defined command file.

- The **ALARM** must be an alarm previously set up with the switch control console alarm command: Refer to Chapter 10 in the *IBM 3728 Communication Control Matrix Switch Operations Guide*, GA27-3643. The alarm command can be carried out in a command file or in direct FELSWCH control.

2. Press the Enter key ← . The resulting signal alarm trigger is entered into the list of active triggers. The command file specified by FILENAME is triggered each time the support processor receives a signal alarm event report that matches the chosen parameters.

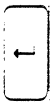
Signal alarm triggers are deleted using the Trigger Function panel's (Figure 9-1) DELETE selection.

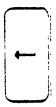
Setting Up Card Online Triggers

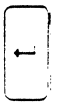
The CARDON selection from the Event-Driven Trigger Condition panel (Figure 9-3) allows you to create a card online trigger. To create a card online trigger:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 2 into the command area and press the Enter key  . The Trigger Function panel (Figure 9-1) is displayed.

4. Type 2 into the command area and press the Enter key  . The Event-Driven Trigger Condition panel (Figure 9-3) is displayed.

5. Type 2 into the command area and press the Enter key  . The Card On-Line Trigger Condition panel (Figure 9-5) is displayed.

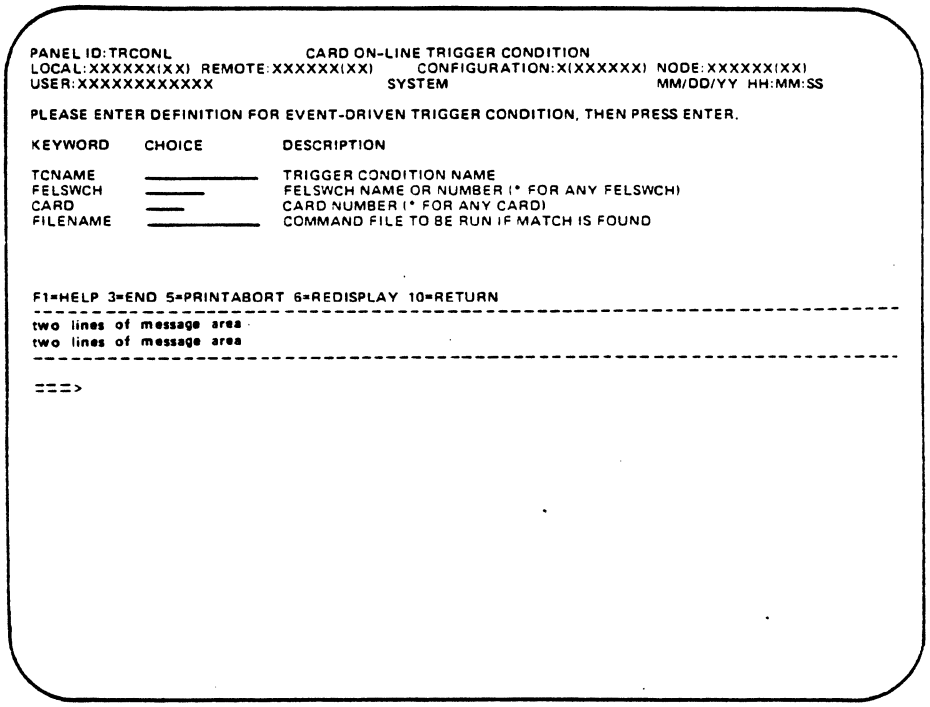


Figure 9-5. Card On-Line Trigger Condition Panel

This panel asks you to select the parameters of a card online trigger. To define a card online trigger:

1. Complete the CHOICE column of the Card On-Line Trigger Condition panel. The following rules apply to your selections:

- The **TCNAME**(trigger condition name) must be a currently undefined trigger condition name. The TCNAME can be an alphanumeric text string of 1 to 12 characters.

- The **FILENAME** must be the name of a currently defined command file.

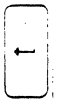
2. Press the Enter key ← . The resulting card online trigger is entered into the list of active triggers. The command file specified by FILENAME is triggered each time the support processor receives a card online event report that matches the chosen parameters.

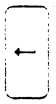
A card online trigger is deleted using the Trigger Function panel's (Figure 9-1) DELETE selection.

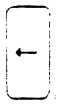
Setting Up Card Off Line Triggers

The CARDOFF command from the Event-Driven Trigger Condition panel (Figure 9-3) allows you to create a card offline trigger. To create a card offline trigger:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 2 into the command area and press the Enter key  . The Trigger Function panel (Figure 9-1) is displayed.

4. Type 2 into the command area and press the Enter key  . The Event-Driven Trigger Condition panel (Figure 9-3) is displayed.

5. Type 3 into the command area and press the Enter key  . The Card Off-Line Trigger Condition panel (Figure 9-6) is displayed.

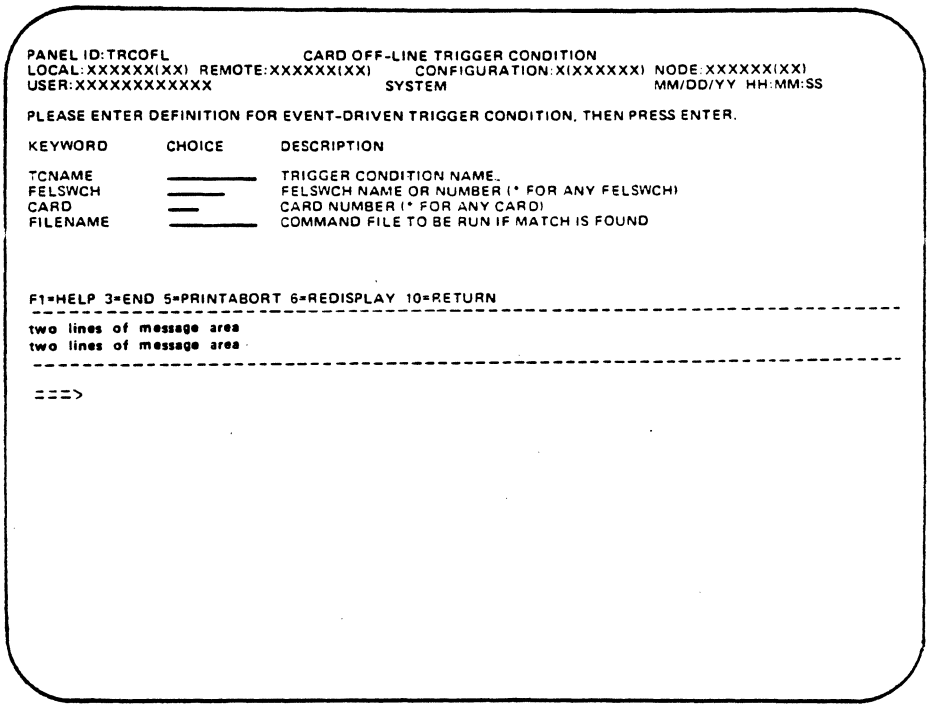


Figure 9-6. Card Off-Line Trigger Condition Panel

This panel asks you to select the parameters of a card offline trigger. To define a card offline trigger:

1. Complete the CHOICE column of the panel. The following rules apply to your selections:

- The **TCNAME** (trigger condition name) must be a currently undefined trigger condition name. The TCNAME can be an alphanumeric text string of 1 to 12 characters.

- The **FILENAME** must be the name of a currently defined command file.

2. Press the Enter key ← . The resulting card offline trigger is entered into the list of active triggers. The command file specified by FILENAME is triggered each time the support processor receives a card offline event report that matches the chosen parameters.

A card offline trigger is deleted using the Trigger Function panel's (Figure 9-1) DELETE selection.

Defining Alarm-Driven Trigger Groups

How Alarm-Driven Trigger Groups Operate

The GROUP selection from the Trigger Function panel (Figure 9-1) allows you to select a command file that triggers when a group of chosen events occur. A group of chosen events is defined as a trigger group. A trigger group is the same as a collection of event-driven triggers except:

- All of the events of a trigger group must occur at the same time to trigger a command file.
- Trigger groups respond to alarms on signal levels only. Port card online and port card offline alarms cannot be part of trigger groups.
- The conditions of a trigger group must be specifically stated. That is, for the various signal alarms that make up a trigger group, you must specify a FELSWCH name or number, port name or number, and alarm number. There is no feature that allows you to select an **any** option (such as any port).
- Information contained in the event reports that trigger a command file cannot be passed to the command file. Therefore, command files that are triggered by a trigger group cannot rely on information contained in the event reports for execution.
- Many trigger groups can be defined at one time, but only seven or fewer can be active. Inactive trigger groups can be activated when they are needed.

Just as in event-driven triggers, the support processor knows of the occurrence of an event through the receipt of the corresponding event report. The ***only*** event report looked at by trigger groups is the alarm on signal report, which is sent to the support processor in the form:

PORT aaaaaa(aaa) ALARM #b (ccc)

(aaaaaaaaa) is the port name and number: ***b*** is the alarm number [0 or 1]; and ***cc*** is the signal name).

> **Note:** Event reports are produced in a Matrix Switch and sent to the support processor. If you are not familiar with event reports, event report destinations, and alarming ports, refer to the *IBM 3728 Communication Control Matrix Switch Operations Guide*, GA27-3643.

The only way a group of events can trigger a command file is if their corresponding event reports are sent to the support processor. It is therefore necessary to ensure that the event reports that are to act as triggers reach your support processor. Event reports are distributed in a network through the assignment of event report destinations. Chapter 3 describes how to have

event reports sent to the support processor. When you set up each trigger group, you specify the parameters of two to 25 event reports, and an associated command file. The support processor then looks for a match between the parameters you select and the parameters contained in the incoming event reports. If a complete match is found between all the conditions of the trigger group and a group of event reports received at the same time, the command file is triggered.

> **Note:** The support processor alarm repeat timer (ART) determines that event reports are received at the same time. Each Matrix Switch and support processor has an ART time of from 1 to 31 minutes. When the support processor receives an event report that matches one condition of a trigger group, it starts an ART. The ART runs as long as the support processor ART time. The ART is restarted each time the alarm report is received again. Events are said to happen at the same time if their ARTs are running at the same time.

The support processor ART time is set using the switch control console select and edit switch commands. These commands can be carried out in direct FELSWCH control or in a command file. To set the support processor ART time, use the switch control console commands and:

1. Choose, with the select command, the support processor as the selected switch. The support processor is identified by its node name or number.

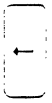
2. Set the support processor ART time, with the edit switch command, as if it were a Matrix Switch.

If you do not set the support processor ART time, the default value is 5 minutes.

Setting Up Trigger Groups

The GROUP selection from the Trigger Function panel (Figure 9-1) allows you to set up trigger groups. To set up trigger groups:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 2 into the command area and press the Enter key ↵ . The Trigger Function panel (Figure 9-1) is displayed.

4. Type 3 into the command area and press the Enter key ↵ . The Trigger Group Name Selection panel (Figure 9-7) is displayed.

```
PANEL ID:TRGRPN              TRIGGER GROUP NAME SELECTION
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    .CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                      SYSTEM                   MM/DD/YY HH:MM:SS

PLEASE ENTER NAME OF TRIGGER GROUP, THEN PRESS ENTER.

KEYWORD     CHOICE              DESCRIPTION

GROUPNAME   ____________        THE NAME OF A NEW OR EXISTING TRIGGER GROUP


F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------
===>
```

Figure 9-7. Trigger Group Name Selection Panel

This panel asks you to select the name of a trigger group. To select the name of a trigger group:

1. Type the name of a new or existing trigger group. The trigger group name can be an alphanumeric text string of 1 to 12 characters. If you need to see a list of existing trigger groups, press function key F1 (HELP).

2. Press the Enter key ↵ . The screen displays the Trigger Group Definition panel (Figure 9-8).

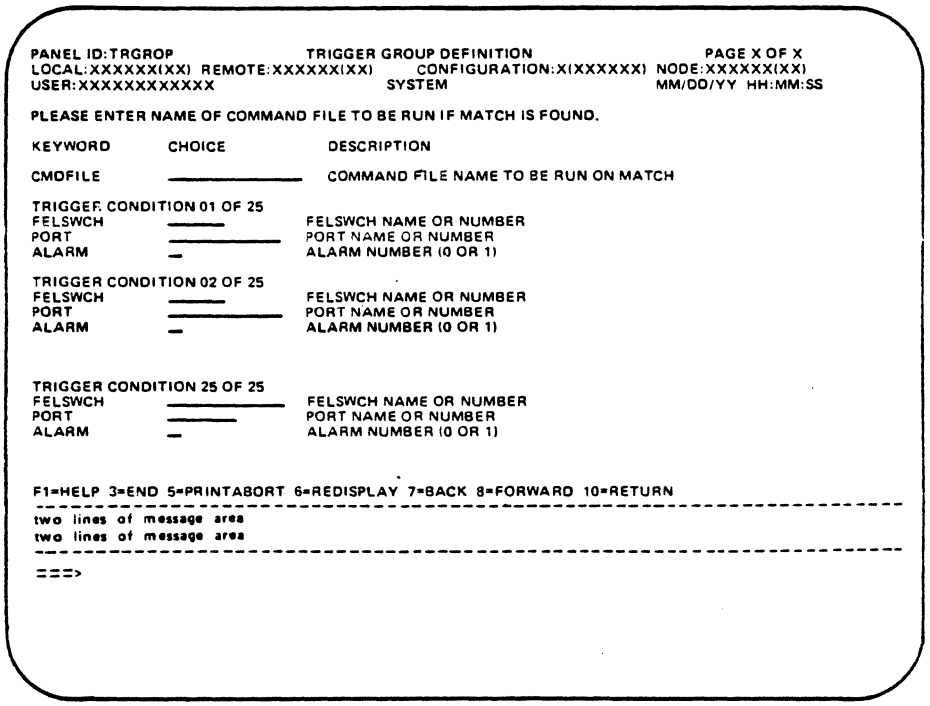


Figure 9-8. Trigger Group Definition Panel

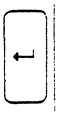
This panel asks you to set up your trigger group. If your trigger group selection is a new trigger group, the CHOICE column is blank. If your trigger group selection is an existing trigger group, your previous parameter selections are in the CHOICE column. Previous parameter selections can be changed by typing over the displayed values.

To set up the trigger group:

1. Complete the CHOICE column. The following rules apply to your selections.

- **CMDFILE** (command file) must be a currently defined command file.
- You must define between two and 25 trigger conditions.
- There are no default values.

If you want to see a list of currently defined command files, press function key F1 (HELP).

2. Press the Enter key  .

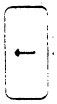
If you created a new trigger group, it is saved but ***not*** active. Only an active trigger group can trigger a command file. To activate a trigger group, choose the ACTIVATE command from the Trigger Function panel (Figure 9-1).

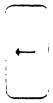
If you changed an existing trigger group that is active, the change is not part of the active definition. To incorporate the change into the active definition of the trigger group, choose ACTIVATE from the Trigger Function panel (Figure 9-1).

Displaying Trigger Group Contents

The DISPGROUP selection from the Trigger Function panel (Figure 9-1) allows you to select a trigger group and display its contents. Trigger groups are created with the GROUP selection from the TRIGGER FUNCTION panel (Figure 9-1). To display the contents of a trigger group:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 2 into the command area and press the Enter key  . The Trigger Function panel (Figure 9-1) is displayed.

4. Type 4 into the command area and press the Enter key  . The Display Trigger Group Name Selection panel (Figure 9-9) is displayed.

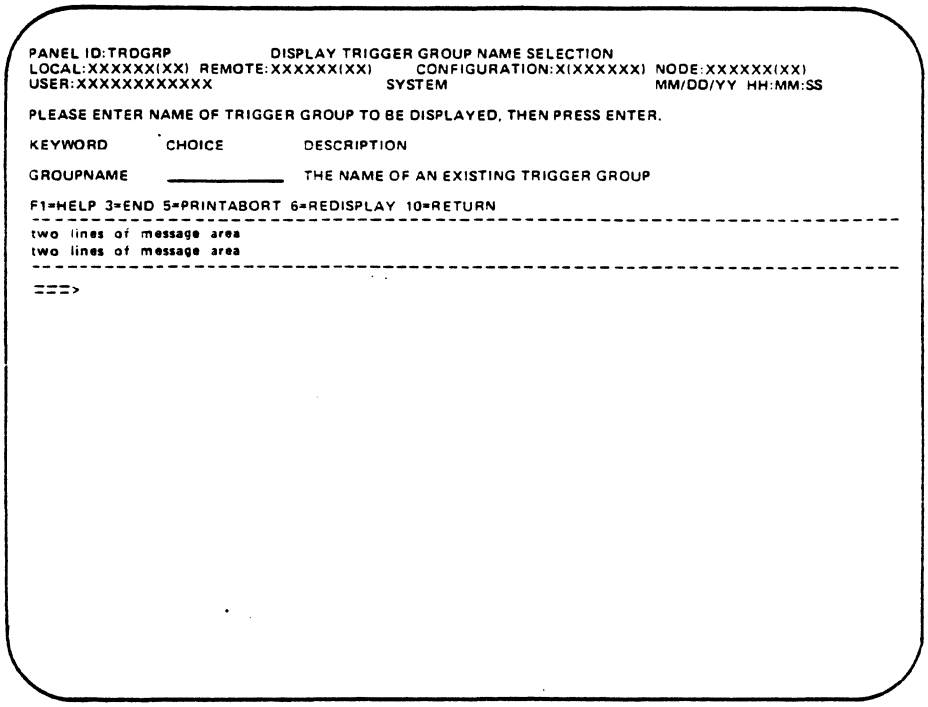


Figure 9-9. Display Trigger Group Name Selection Panel

This panel asks you to select the name of a trigger group. To select the name of a trigger group:

1. Type the name of an exisiting trigger group. If you need to see a list of existing trigger groups, press function key F1 (HELP).

2. Press the Enter key ← . The screen displays the Trigger Group Contents panel (Figure 9-10).

The panel displays all the defining parameters of the selected trigger group. You cannot change any of the values displayed.

To return to the Display Trigger Grup Name Selection panel (Figure 9-9), press function key F3 (END).

```
PANEL ID:TRGRPC                TRIGGER GROUP CONTENTS                    PAGE X OF X
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                      SYSTEM                  MM/DD/YY HH:MM:SS

GROUP NAME    : grpnamexxxx
COMMAND FILE  : cmdnamexxxx
STATUS        : ACTIVE (INACTIVE)

NMBR        FELSWCH     PORT          ALARM

01          xxxxxx      xxxxxxxxx     x
02          xxxxxx      xxxxxxxxx     x
03          xxxxxx      xxxxxxxxx     x
04          xxxxxx      xxxxxxxxx     x
05          xxxxxx      xxxxxxxxx     x
06          xxxxxx      xxxxxxxxx     x
07          xxxxxx      xxxxxxxxx     x
08          xxxxxx      xxxxxxxxx     x
09          xxxxxx      xxxxxxxxx     x
10          xxxxxx      xxxxxxxxx     x
11          xxxxxx      xxxxxxxxx     x
12          xxxxxx      xxxxxxxxx     x
13          xxxxxx      xxxxxxxxx     x
14          xxxxxx      xxxxxxxxx     x
15          xxxxxx      xxxxxxxxx     x
16          xxxxxx      xxxxxxxxx     x
17          xxxxxx      xxxxxxxxx     x
18          xxxxxx      xxxxxxxxx     x
19          xxxxxx      xxxxxxxxx     x
20          xxxxxx      xxxxxxxxx     x
21          xxxxxx      xxxxxxxxx     x
22          xxxxxx      xxxxxxxxx     x
23          xxxxxx      xxxxxxxxx     x
24          xxxxxx      xxxxxxxxx     x
25          xxxxxx      xxxxxxxxx     x

F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 7=BACK 8=FORWARD 10=RETURN
two lines of message area
two lines of message area
===>
```

Figure 9-10. Trigger Group Contents Panel

Activating Trigger Groups

The ACTIVATE selection from the Trigger Function panel (Figure 9-1) allows you to activate and deactivate defined trigger groups. Trigger groups are created with the GROUP selection from the TRIGGER FUNCTION panel (Figure 9-1).

> **Note:** It is not necessary to activate time-driven trigger conditions or event-driven trigger conditions. Only trigger ***groups*** are activated and deactivated.

If a trigger group is active, it can trigger a command file. Up to seven trigger groups can be active at one time. Inactive trigger groups are saved but cannot trigger a command file. Inactive trigger groups can be activated when they are needed.

To activate or deactivate a trigger group:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Slection panel.

2. Type 2 into the command area and press the Enter key ↵. The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 2 into the command area and press the Enter key ↵. The Trigger Function panel (Figure 9-1) is displayed.

4. Type 5 into the command area and press the Enter key ↵. The Activate Trigger Group panel (Figure 9-11) is displayed.

This panel lists all the active trigger groups by trigger group name.

```
PANEL ID:TRACTV                  ACTIVATE TRIGGER GROUP
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE XXXXXX(XX)
USER:XXXXXXXXXXX                 SYSTEM                  MM/DD/YY HH:MM:SS

ACTIVE TRIGGER GROUPS (UP TO SEVEN ARE ALLOWED).
PLEASE TYPE THE NAMES OF TRIGGER GROUPS YOU WISH TO BE ACTIVE.
TYPE BLANKS IF YOU WISH TO DEACTIVATE A GROUP.  THEN PRESS ENTER.

ACTIVE NUMBER    GROUPNAME     DESCRIPTION

GR1              TRIGGERGRP1   ACTIVE TRIGGER GROUP NUMBER 1
GR2              _________     ACTIVE TRIGGER GROUP NUMBER 2
GR3              _________     ACTIVE TRIGGER GROUP NUMBER 3
GR4              TRIGGERGRP2   ACTIVE TRIGGER GROUP NUMBER 4
GR5              _________     ACTIVE TRIGGER GROUP NUMBER 5
GR6              _________     ACTIVE TRIGGER GROUP NUMBER 6
GR7              _________     ACTIVE TRIGGER GROUP NUMBER 7

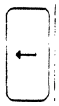

F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------
===>
```

Figure 9-11. Activate Trigger Group Panel

To activate a trigger group:

1. Type the trigger group name into one of the blank spaces under GROUPNAME. If there are no blank spaces, you can type over a current entry, which results in deactivating that entry.

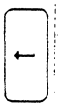
If you want to see a list of currently defined trigger group names, press function key F1 (HELP).

2. Press the Enter key  . The trigger group is activated and remains active until it:

   - Triggers its command file
   - Is deactivated.

To deactivate a trigger group:

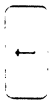
1. Type over the trigger group name with another trigger group name, or blank it out with the space bar.

2. Press the Enter key  .

Listing Trigger Conditions

To display all trigger conditions:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 2 into the command area and press the Enter key ↵ . The Trigger Function panel (Figure 9-1) is displayed.

4. Type 6 into the command area and press the Enter key ↵ . The List of Active Trigger Conditions panel (Figure 9-12) is displayed.

```
PANEL ID:TRLIST          LIST OF ACTIVE TRIGGER CONDITIONS                PAGE X OF X
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:0(ACTIVE) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                      SYSTEM                  MM/DD/YY HH:MM:SS

TIME-DRIVEN TRIGGER CONDITIONS

tcnamexxxxxx      MM/DD/YY  HH:MM:SS      123      HHH:MM      filenamexxxx

EVENT REPORT-DRIVEN TRIGGER CONDITIONS

ALARM SYSTEM MESSAGES
tchnamexxxxxx      snamex      portnamex      rts      0      filenamexxxx

CARD ON-LINE SYSTEM MESSAGES
tcnamexxxxxx      snamex      x-xx      filenamexxxx

CARD OFF-LINE SYSTEM MESSAGES
tcnamexxxxxx      sname      x-xx      filenamexxxx

TRIGGER GROUPS

triggergroup
triggergroup - ACTIVE
triggergroup
triggergroup
triggergroup
triggergroup - ACTIVE
triggergroup
triggergroup
triggergroup

F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 7=BACK 8=FORWARD 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------

===>
```

Figure 9-12. List of Active Trigger Conditions Panel

This panel consists of more than one page. To scroll back and forth through this panel, use function keys F7 (BACK) and F8 (FORWARD).

For a description of the information given on this panel, press function key F1 (HELP).

To return to the Trigger Function panel (Figure 9-1), press function key F3 (END).

Deleting Trigger Conditions

The DELETE selection from the Trigger Function panel (Figure 9-1) allows you to delete selected triggers. With the DELETE selection, you can delete time-driven triggers, event-driven triggers, and group triggers.

To delete a trigger condition:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key ↵ . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 2 into the command area and press the Enter key ↵ . The Trigger Function panel (Figure 9-1) is displayed.

4. Type 7 into the command area and press the Enter key ↵ . The Delete Trigger Conditions panel (Figure 9-13) is displayed.

```
PANEL ID:TRDEL                DELETE TRIGGER CONDITIONS
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                SYSTEM                    MM/DD/YY HH:MM:SS

PLEASE ENTER THE NAME OF TRIGGER CONDITION OR TRIGGER GROUP TO BE DELETED.
THEN PRESS ENTER TO DELETE IT.

KEYWORD    CHOICE          DESCRIPTION

NAME       _____           THE NAME OF AN EXISTING TRIGGER CONDITION OR GROUP



F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------

===>
```

Figure 9-13. Delete Trigger Conditions Panel

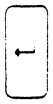
This panel asks you to select the name of the trigger condition or trigger group you want to delete.

To delete a trigger condition:

1. Enter the name of an existing trigger. Any of the following entries are valid.

   - Time-driven trigger condition names
   - Event report-driven trigger condition names
   - Trigger group names.

   If you want to see a list of all existing triggers, press function key F1 (HELP).

2. Press the Enter key  . The trigger is deleted.

Chapter 10

Managing the Disk Files: The File Command

This chapter describes how to use the file command.

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File Command

The file command is used to manage the log, report, command, program, and system files, which are defined as follows.

- **Log files** are copies of all system messages received by the support processor, complete commands entered successfully from the keyboard, and commands entered by the run and trigger functions. The log files consist of up to 32 files, LOG00 through LOG31, of 32K bytes each. These files are written in a round-robin fashion; the oldest file is automatically erased when the current file becomes full and a new one must be opened. The log files require about 1 megabyte on the fixed disk, and hold about 16,000 system messages and command lines.

- **Report files** are data created by a memory dump. This is a special service feature of the support processor and is a maintenance function.

- **Command files** are sequences of switch control console commands. Command files are described in Chapter 6.

- **Program files** are the programs that run the support processor.

- **System files** are all the information entered by the user at a support processor. These include trigger conditions and user passwords and IDs.

The support processor performs most file functions in the background mode. This leaves the screen and keyboard free to perform other functions. Some file functions, however, require panel displays. When the support processor executes these functions, you cannot use it for anything else.

The support processor allows the following file functions:

- File directories: Allows you to list log, report, and command file names and, if desired, some additional information.

- File backup: Allows you to copy log, report, and command files onto a diskette.

- File restore: Allows you to copy log, report, command, program, and system files from the floppy diskette to the fixed disk.

- File delete: Allows you to delete log, report, and command files.

- File rename: Allows you to rename report or command files.

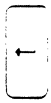
- File transfer: Allows you to transfer report or command files from local support processors to remote support processors, and vice versa.

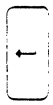
- File format: Allows you to initialize fixed disks.
- File mount: Allows you to mount or dismount fixed disks.

The File Command Main Selection Menu

The file command is selected from the Support Processor System Functions panel (Figure 4-4), which is described in Chapter 4. To display the file command main selection menu:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 4 into the command area and press the Enter key  . The File Utilities panel (Figure 10-1) is displayed.

The File Utilities panel (Figure 10-1) gives you the main selections of the file command, which are described in the following sections.

> **Note:** If you select the file command on the local support processor, you cannot transfer files and the TRANSFER option is not authorized on the File Utilities panel (Figure 10-1). If you select the file command at a remote support processor, backup, restore, and mount files are notauthorized operations, as those commands require access to the diskette drive, which you do not have.

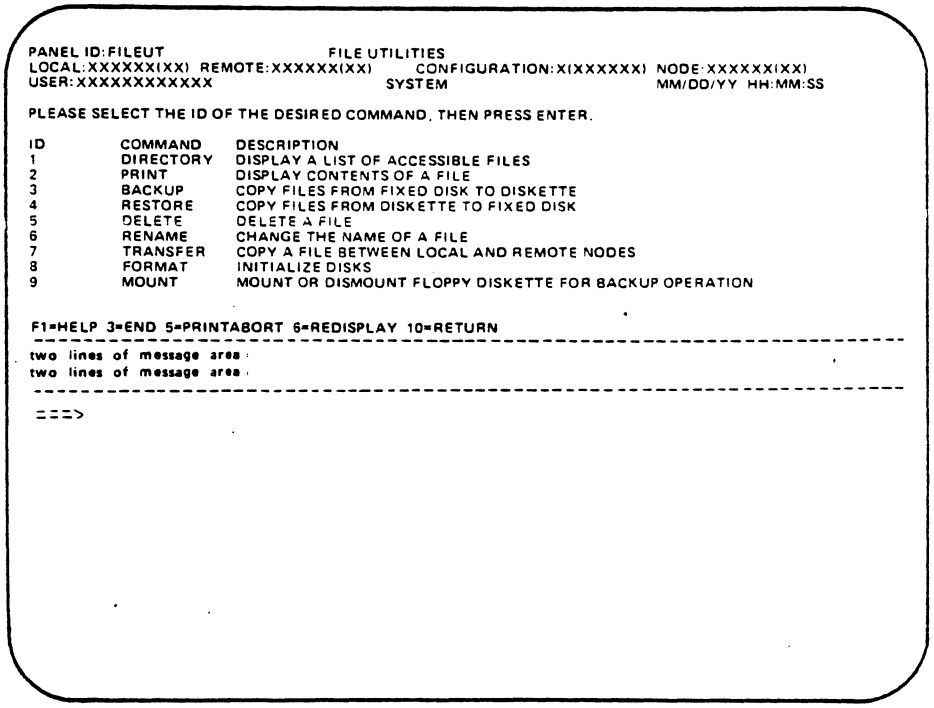


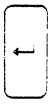
Figure 10-1. File Utilities Panel

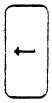
Displaying a File Directory

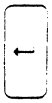
The DIRECTORY selection from the File Utilities panel (Figure 10-1) allows you to print log, report, and command file names on the screen or printer that you specify. The files may be on a disk or diskette. You can print **brief directories** that alphabetically list file names only, or **full directories** that contain more information. If you choose to print directories on the printer, the support processor performs this command in the background mode, allowing you to use the keyboard and screen for another activity. You cannot use the keyboard and screen for another activity if you choose to print the directories on the screen.

To display a file directory:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 4 into the command area and press the Enter key  . The File Utilities panel (Figure 10-1) is displayed.

4. Type 1 into the command area and press the Enter key  . The File Directory Request panel (Figure 10-2) is displayed.

The File Directory Request panel (Figure 10-2) asks you to select the parameters of a file directory display. To define your file directory request:

1. Complete the CHOICE column. The following rules apply to your selections:

- The **DEVICE** can be the fixed disk or the floppy diskette. If you do not specify a DEVICE, the system defaults to the fixed disk.
- The **TYPE** of file for which you can print a directory is either a command, log, or report file. If you do not specify a TYPE, the system defaults to command.
- The **OUTPUT** device is either the screen or the printer. If you do not specify an OUTPUT, the system defaults to the screen.
- The **LIST** parameter specifies the type of directory listing that you want. You may have a brief or full listing. If you do not specify a LIST, the system defaults to brief listing.

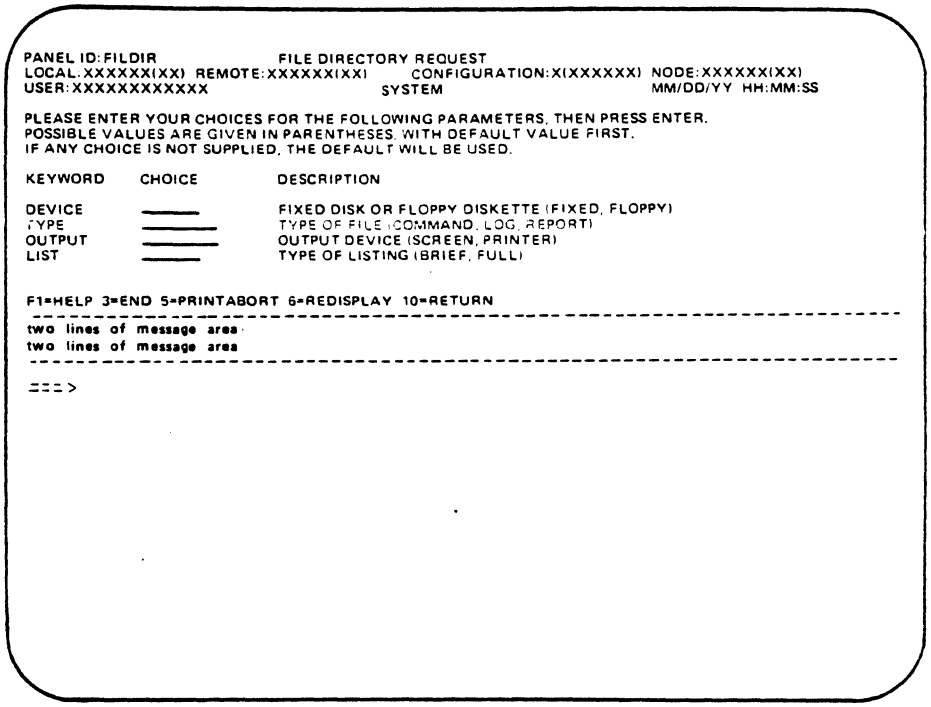


Figure 10-2. File Directory Request Panel

2. Command, log, and report files can have brief or full listings. The following list explains what is included in each type of file directory listing.

- A command, log, or report file with a brief listing displays only the file names, in alphabetical order, and in four columns. Figure 10-3 shows the brief file directory listing for a command file.

- A command file with a full listing displays the file name, access categories, and the size of the file in bytes. Figure 10-4 shows the full file directory listing for a command file.

- A report file with a full listing displays the file name, access categories, and the size of the file in bytes. Figure 10-5 shows the full file directory listing for a report file.

- A log file with a full listing does not display access categories. Instead, log files display start and end times that help you locate system messages within a log file. Start and end times are displayed along with the file name. Figure 10-6 shows the full file directory listing for a log file. The log file that is currently being written to is the log file with the most recent start time.

```
PANEL ID:FILDIB                    FILE DIRECTORY LISTING                    PAGE X OF X
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                   SYSTEM                    MM/DD/YY HH:MM:SS

COMMAND:  FILE DIRECTORY DEVICE=FIXED OUTPUT=SCREEN TYPE=COMMAND LIST=BRIEF

file01          file02          file03          file04
file05          file06          file07          file08
file09          file10          file11          file12
file13          file14          file15          file16
file17          file18          file19          file20
file21          file22          file23          file24
file25          file26          file27          file28
file29          file30          file31          file32
file33          file34          file35          file36
file37          file38          file39          file40
file41          file42          file43          file44
file45          file46          file47          file48
file49          file50          file51          file52
file53          file54          file55          file56
file57          file58          file59          file60
file61          file62          file63          file64
file65          file66          file67          file68
file69          file70          file71          file72


F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 7=BACK 8=FORWARD 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------

===>
```

Figure 10-3. Brief File Directory Listing Panel

```
PANEL ID:FILDIF                    FILE DIRECTORY LISTING                    PAGE X OF X
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                   SYSTEM                    MM/DD/YY HH:MM:SS

COMMAND:  FILE DIRECTORY DEVICE=FLOPPY OUTPUT=SCREEN TYPE=COMMAND LIST=FULL

                        THIS IS (NOT) A PROGRAM DISK/DISKETTE

        FILE            PRINT/RUN       MODIFY      SIZE(CHARS)

        LONGFILENAME        G               C           1093
        ANOTHERFILE         F               D            319
        JUSTAFILE           *               *           1024
        SECUREFILE          A               A             57


F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 7=BACK 8=FORWARD 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------

===>
```

Figure 10-4. Full File Directory Listing Panel

```
PANEL ID:FILDIF                    FILE DIRECTORY LISTING                    PAGE X OF X
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)     CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                   SYSTEM                    MM/DD/YY HH:MM:SS

COMMAND:  FILE DIRECTORY DEVICE=FLOPPY OUTPUT=SCREEN TYPE=REPORT LIST=FULL

                        THIS IS (NOT) A PROGRAM DISK/DISKETTE

        FILE              PRINT/RUN      MODIFY      SIZE(CHARS)

        REPSWITCH001          A             C            1093
        REPNET032283          *             *             725
        REPPORT11239          *             B              91
        REPPALARM001          C             *             129


F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 7=BACK 8=FORWARD 10=RETURN
--------------------------------------------------------------------------------
two lines of message area.
two lines of message area
--------------------------------------------------------------------------------
 ===>
```

Figure 10-5. Full File Directory Listing for a Report File Panel

```
PANEL ID:FILDIF                    FILE DIRECTORY LISTING                    PAGE X OF X
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)     CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                   SYSTEM                    MM/DD/YY HH:MM:SS

COMMAND:  FILE DIRECTORY DEVICE=FLOPPY OUTPUT=SCREEN TYPE=LOG LIST=FULL

                        THIS IS (NOT) A PROGRAM DISK/DISKETTE

        FILE              START TIME              END TIME

        LOG05         02/15/83 23:42:19      02/19/83 09:17:05
        LOG06         02/19/83 09:24:33      02/22/83 17:41:28


F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 7=BACK 8=FORWARD 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------
 ===>
```

Figure 10-6. Specified File Directory Listing Panel

Note: A message appears for full listings at the top of the directories, indicating if the system programs are on the selected device.

3. Press the Enter key ↵ . The panel displays the file directory you specified in step 2.

4. If the output device is the screen, press function key F3 [END] when you are finished looking at the directory to return control to the File Directory Request Panel (Figure 10-2).

Displaying a File's Contents

The PRINT selection from the File Utilities panel (Figure 10-1) allows you to print the contents of log, report, and command files on the screen or printer that you specify. The files may be on a fixed disk or floppy diskette. When you send a file print to the printer, you can use the keyboard and the screen because the support processor performs this operation in the background mode. If the file print is sent to the screen, the keyboard and screen cannot be used.

To display the contents of a file:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key ↵ . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 4 into the command area and press the Enter key ↵ . The File Utilities panel (Figure 10-1) is displayed.

4. Type 2 into the command area and press the Enter key ↵ . The File Print Request panel (Figure 10-7) is displayed.

The File Print Request panel (Figure 10-7) asks you to select the parameters of a file print display. To define your file print request:

1. Complete the CHOICE column. The following rules apply to your selections:

   - The **FILENAME** must be the name of a currently defined command, log, or report file. It must be defined on the device (fixed disk or floppy diskette) that you specify with the TYPE parameter.
   - The **DEVICE** can be the fixed disk or the floppy diskette. If you do not specify a DEVICE, the system defaults to the fixed disk.
   - The **TYPE** of file for which you can print a directory is either a command, log, or report file. If you do not specify a TYPE, the system defaults to command.
   - The **OUTPUT** device is either the screen or the printer. If you do not specify an OUTPUT, the system defaults to the screen.

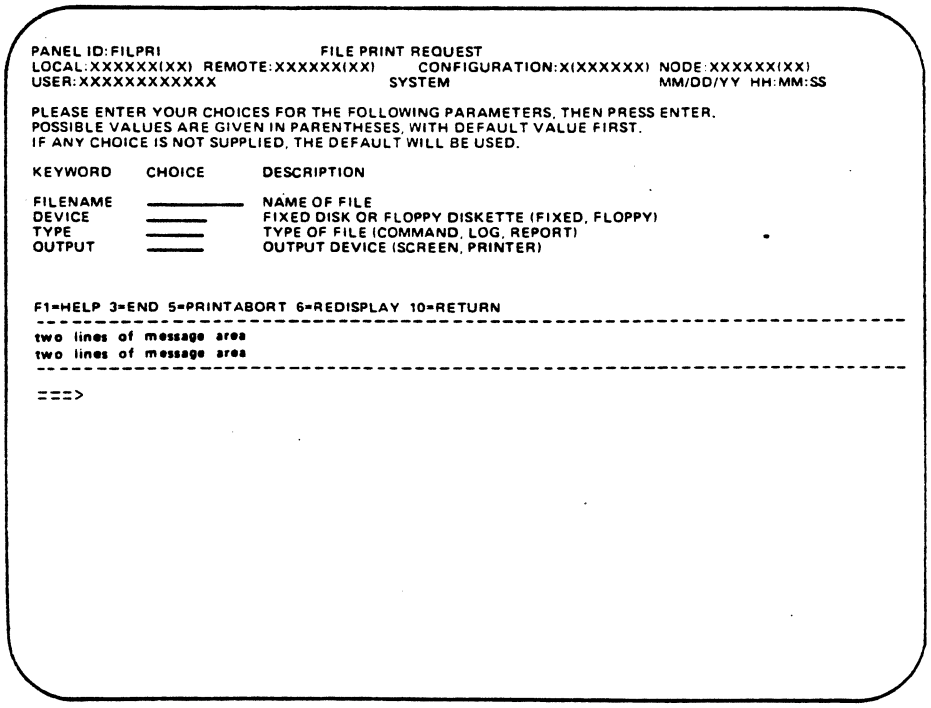
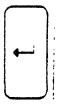


Figure 10-7. File Print Request Panel

2. Press the Enter key  . The panel displays the File Contents panel (Figure 10-8) for the file that you specified in step 1.

```
PANEL ID:FILCON                    FILE CONTENTS                    PAGE X OF X
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)   CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                   SYSTEM                    MM/DD/YY HH:MM:SS

          CONTENTS OF FLOPPY DISKETTE COMMAND FILE COMMANDFILE001

text from file
text from file
text from file
text from file
text from file
text from file
text from file
text from file
text from file
text from file
text from file
text from file

F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 7=BACK 8=FORWARD 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------
===>
```

Figure 10-8. File Contents Panel

3. If the OUTPUT device is the screen, as it is in this example, press function key F3 (END) when you are finished looking at the file, to return control to the File Print Request panel (Figure 10-7).

   Note: If some of the characters in the file are displayed as asterisks, it is because there was a percent sign (%) in the file.

File Backup

The BACKUP selection from the File Utilities panel (Figure 10-1) allows you to take the command, log, report, or system file that is on a fixed disk and copy them onto a floppy diskette. The support processor performs this command in the background mode, allowing you to use the keyboard and screen for another activity.

You can only back up files if you are logged on to the local support processor. This command only backs up files to floppy diskettes that were formatted using the FILE FORMAT command.

> **Note:** When performing the backup operation, only floppy diskettes that have been formatted by the support processor file format function may be used. If floppy diskettes formatted by other operating systems are used, unpredictable results occur.

To back up files:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.
2. Type 2 into the command area and press the Enter key ↵ . The Support Processor System Functions panel (Figure 4-4) is displayed.
3. Type 4 into the command area and press the Enter key ↵ . The File Utilities panel (Figure 10-1) is displayed.
4. Type 3 into the command area and press the Enter key ↵ . The File Backup Request panel (Figure 10-9) is displayed.

```
PANEL ID:FILBAC                    FILE BACKUP REQUEST
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                   SYSTEM                  MM/DD/YY HH:MM:SS

PLEASE ENTER YOUR CHOICES FOR THE FOLLOWING PARAMETERS, THEN PRESS ENTER.
POSSIBLE VALUES ARE GIVEN IN PARENTHESES, WITH DEFAULT VALUE FIRST.
IF ANY CHOICE IS NOT SUPPLIED, THE DEFAULT WILL BE USED.
SYSTEM FILES INCLUDE CONFIGURATION, PROTECTION, AND TRIGGER CONDITION FILES.

KEYWORD     CHOICE          DESCRIPTION

TYPE        _____           TYPE OF FILE (COMMAND, LOG, REPORT, SYSTEM)
FILENAME    _____           NAME OF FILE OR "*" FOR ALL OF THE TYPE. (*, NAME)
                            FILENAME MUST BE "*" FOR TYPE = SYSTEM.



F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------
===>
```

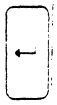
Figure 10-9. File Backup Request Panel

The File Backup Request panel (Figure 10-9) asks you to select the parameters of a file backup request. To define your file backup request:

1. Complete the CHOICE column. The following rules apply to your selections:

   - The **TYPE** of file you can backup is either a command, log, report, or system file. If you do not specify a TYPE, the system defaults to command.

   - The **FILENAME** must be either the name of a currently defined command, log, report, or system file, or an asterisk (*).

2. Press the Enter key  . The file is backed up: copied from the fixed disk to the floppy diskette.

Related system messages are sent:

- As each file is copied from the fixed disk to the floppy diskette.

- If the text file to be copied does not fit on the floppydiskette. This is a high-priority message and it suspends operation until a file mount command is given and a new floppy diskette is inserted. If the message goes unanswered for 2 minutes, it is repeated. If it is still unanswered, it repeats every 2, 5, 10, 15, and then 30 minutes thereafter, until a file mount command is given and a new floppy diskette is inserted.

- Any time you open the diskette drive while the floppy diskette is operating. You are asked to mount a new floppy diskette.

- If the drive is initially empty. You are asked to mount a new floppy diskette.

3. If you want to stop the BACKUP operation, use the mount command. At this point, you can mount a new floppy diskette and continue copying or you can use the mount end command to stop copying.

3. Type 5 into the command area and press the Enter key ← . The Protection (Security) Control panel (Figure 11-1) is displayed.

4. Type 2 into the command area and press the Enter key ← . The Protection User Function panel (Figure 11-3) is displayed.

5. Type 2 into the command area and press the Enter key ← . The Protection User Name Selection panel (Figure 11-5) is displayed.

```
PANEL ID:PROTUN              PROTECTION USER NAME SELECTION
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                SYSTEM                    MM/DD/YY HH:MM:SS

PLEASE ENTER THE NAME OF A NEW OR EXISTING USER, THEN PRESS ENTER.

KEYWORD    CHOICE          DESCRIPTION

USERNAME   _____           NAME OF THE USER WHOSE PRIVILEGES ARE TO BE SET



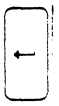
F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------
===>
```

Figure 11-5. Protection User Name Selection Panel

The Protection User Name Selection panel (Figure 11-5) asks you to enter a USERNAME.

- If you select a new user, you are choosing to **create** a new USERNAME.
- If you select an existing USERNAME, you are choosing to **change** the user's password or the user's access rights.

To choose a user's name:

1. Type in a new or existing **USERNAME.** A USERNAME can be an alphanumeric text string of 1 to 12 characters.
2. Press the Enter key  . The screen displays the Change User Access Privileges panel (Figure 11-6).

The Change User Access Privileges panel (Figure 11-6) lists the selected user's name, password, and access rights.

- N means the user is not allowed to perform the described function.
- Y means the user is allowed to perform the described function.

If an existing user is selected, the CHOICE column is filled in with previously selected choices. If a new user is selected, the CHOICE column is filled in with the default values. The default value for PASSWORD is PASSWORD. The default value for all other choices is N. This means a newly created user's password is PASSWORD and the user has no access rights.

To change the user's password or access rights:

1. Change any entry in the CHOICE column by typing over the character(s). Change as many entries as necessary.

   Note: This panel consists of five pages. To scroll back and forth through the pages, use function keys F7 (BACK) and F8 (FORWARD).

2. Press the F3 (END) key. The new access parameters are stored in the user's definition, and the Protection User Function panel (Figure 11-3) returns.

   Note: If a user is logged on, and the user's access password and rights are changed, the password and access rights do not go into effect until the next time the user logs on.

```
PANEL ID:PROTAC              CHANGE USER ACCESS PRIVILEGES              PAGE X OF X
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                      SYSTEM                  MM/DD/YY HH:MM:SS

PLEASE OVERTYPE THE PARAMETERS YOU WISH TO CHANGE, THEN PRESS ENTER.

USERNAME        usernamexxxx

KEYWORD         CHOICE          DESCRIPTION

PASSWORD        ________        PASSWORD WHICH MUST BE PROVIDED TO LOG ON

CLASSA          -               ALLOWED TO ACCESS FILE CLASS A (N/Y)
CLASSB          -               ALLOWED TO ACCESS FILE CLASS B (N/Y)
CLASSC          -               ALLOWED TO ACCESS FILE CLASS C (N/Y)
CLASSD          -               ALLOWED TO ACCESS FILE CLASS D (N/Y)
CLASSE          -               ALLOWED TO ACCESS FILE CLASS E (N/Y)
CLASSF          -               ALLOWED TO ACCESS FILE CLASS F (N/Y)
CLASSG          -               ALLOWED TO ACCESS FILE CLASS G (N/Y)

EMULATION       -               ALLOWED TO PERFORM EMULATION FUNCTION (N/Y)

RUNSCREEN       -               ALLOWED TO PERFORM RUN SCREEN FUNCTION (N/Y)
RUNBATCH        -               ALLOWED TO PERFORM RUN BATCH FUNCTION (N/Y)
TRIGTIME        -               ALLOWED TO PERFORM TRIG TIME FUNCTION (N/Y)
TRIGEVENT       -               ALLOWED TO PERFORM TRIG EVENT FUNCTION (N/Y)
TRIGGROUP       -               ALLOWED TO PERFORM TRIG GROUP FUNCTION (N/Y)
TRIGACTIV       -               ALLOWED TO PERFORM TRIG ACTIVATE FUNCTION (N/Y)
```

```
TRIGLIST        -               ALLOWED TO PERFORM TRIG LIST FUNCTION (N/Y)
TRIGDELETE      -               ALLOWED TO PERFORM TRIG DELETE FUNCTION (N/Y)

EDITFILE        -               ALLOWED TO PERFORM EDIT FILE FUNCTION (N/Y)

FILEDIR         -               ALLOWED TO PERFORM FILE DIRECTORY FUNCTION (N/Y)
FILEPRINT       -               ALLOWED TO PERFORM FILE PRINT FUNCTION (N/Y)
FILEBACKUP      -               ALLOWED TO PERFORM FILE BACKUP FUNCTION (N/Y)
FILERESTORE     -               ALLOWED TO PERFORM FILE RESTORE FUNCTION (N/Y)
FILETRANS       -               ALLOWED TO PERFORM FILE TRANSFER FUNCTION (N/Y)
FILEFORMAT      -               ALLOWED TO PERFORM FILE FORMAT FUNCTION (N/Y)
FILEMOUNT       -               ALLOWED TO PERFORM FILE MOUNT FUNCTION (N/Y)

PROTPASSW       -               ALLOWED TO PERFORM PROTECTION PASSWORD FUNCTION (N/Y)
PROTUSER        -               ALLOWED TO PERFORM PROTECTION USER FUNCTION (N/Y)
PROTFILE        -               ALLOWED TO PERFORM PROTECTION FILE FUNCTION (N/Y)

NODEPRI                         ALLOWED TO PERFORM NODE PRIMARY FUNCTION (N/Y)
NODESEC         -               ALLOWED TO PERFORM NODE SECONDARY FUNCTION (N/Y)
NODENUMBER      -               ALLOWED TO PERFORM NODE NUMBER FUNCTION (N/Y)

FELSWCH         -               ALLOWED TO PERFORM FELSWCH CONTROL FUNCTION (N/Y)

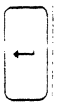
F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 7=BACK 8=FORWARD 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------
===>
```

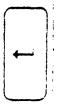
Figure 11-6. Change User Access Privileges Panel

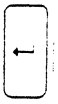
Deleting User Names

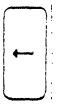
To delete a user name:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 5 into the command area and press the Enter key  . The Protection (Security) Control panel (Figure 11-1) is displayed.

4. Type 2 into the command area and press the Enter key  . The Protection User Function panel (Figure 11-3) is displayed.

5. Type 3 into the command area and press the Enter key  . The Delete a User panel (Figure 11-7) is displayed.

The Delete a User panel (Figure 11-7) asks you to select a user name to delete.

To delete a user name:

1. Type in the name of a currently defined user.

2. Press function key F3 (END). The user name is deleted and can no longer be used during logon. The Protection User Function panel (Figure 11-3) is displayed.

   Note: If the deleted user is currently logged on, the delete does not take effect until the next time the user tries to log on.

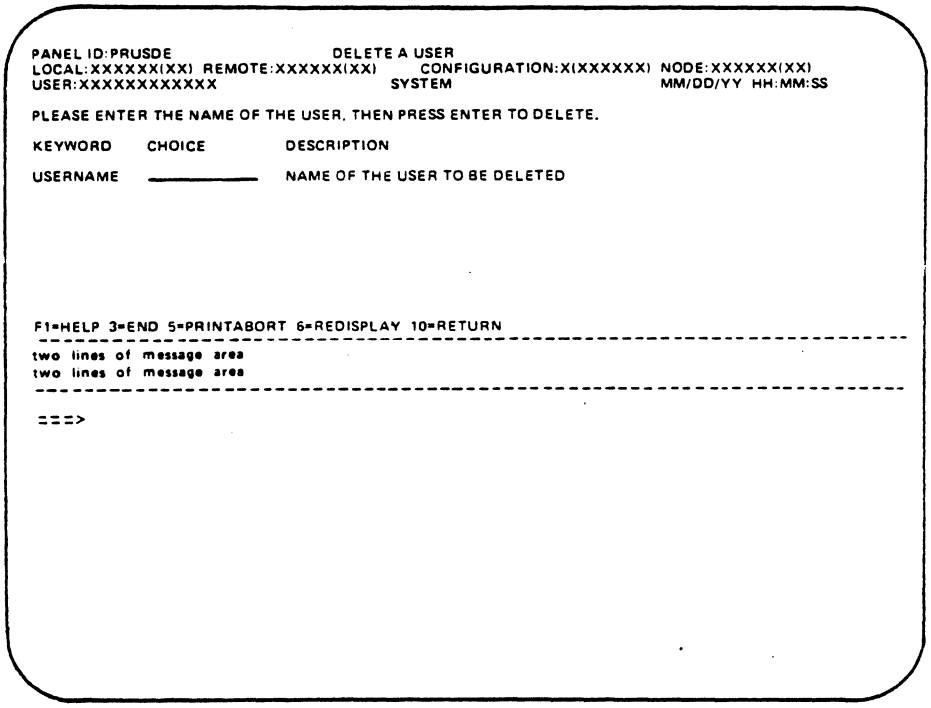


Figure 11-7. Delete a User Panel

Changing Command and Report File Access Classes

The FILE selection from the Protection (Security) Control panel (Figure 11-1) allows you to change the access classes for the command and report files.

To change the access classes for the command and report files:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key ← . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 5 into the command area and press the Enter key ↵ . The Protection (Security) Control panel (Figure 11-1) is displayed.

4. Type 3 into the command area and press the Enter key ↵ . The Protection File Function panel (Figure 11-8) is displayed.

```
PANEL ID:PROTFI                    PROTECT FILE FUNCTION
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                   SYSTEM                  MM/DD/YY HH:MM:SS

PLEASE SELECT THE FILE FOR PROTECTION CHANGE.
POSSIBLE VALUES ARE GIVEN IN PARENTHESES, WITH DEFAULT VALUE FIRST.
IF DEVICE OR TYPE IS NOT SUPPLIED, THE DEFAULT WILL BE USED.

KEYWORD     CHOICE      DESCRIPTION

FILENAME    _________   NAME OF THE FILE
DEVICE      _____       FIXED DISK OR FLOPPY DISKETTE (FIXED, FLOPPY)
TYPE        _____       TYPE OF FILE (COMMAND, REPORT)

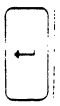

F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------
===>
```

Figure 11-8. Protection File Function Panel

The Protection File Function panel (Figure 11-8) asks you to select a file for access class change.

To select a file:

1. Complete the CHOICE column. **FILENAME** must be the name of a file. The file must be on the device specified by **DEVICE** and of the type specified by **TYPE.**

2. Press the Enter key  . The screen displays the Protect File Access Class Entry panel (Figure 11-9).

```
PANEL ID:PROTFA              PROTECT FILE ACCESS CLASS ENTRY
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                SYSTEM                    MM/DD/YY HH:MM:SS

PLEASE ENTER THE NEW ACCESS CLASS VALUES FOR FILE filenamexxxx.
IF ACCESS CLASS IS NOT SUPPLIED, OLD VALUE IS RETAINED.

KEYWORD     CHOICE      DESCRIPTION

PRINTRUN    -           PRINT/RUN ACCESS CLASS (*,A,B,C,D,E,F,G)
MODIFY      -           MODIFY ACCESS CLASS (*,A,B,C,D,E,F,G)



F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------
===>
```

Figure 11-9. Protect File Access Class Entry Panel

The Protect File Access Class Entry panel (Figure 11-9) asks you to select the print/run and the modify access classes for the selected file.

To select the print/run categories:

1. Complete the CHOICE column. A selection of * means that any user has print/run or modify access to the file.

2. Press function key F3 (END). The new file access parameters are stored in the file's access definition. The Protection User Function panel (Figure 11-3) returns.

Chapter 12

Setting Up Support Processor Configurations: The Node Command

This chapter describes how to use the node command.

Contents

The Node Command 12-1
The Node Command Main Selection Menu 12-1

The Node Command

The node command is used to set up various configuration parameters of the support processor. The node command cannot be used if you are logged on to a remote support processor.

The node commands allows you to set your support processor's:

- Primary asynchronous communication adapter's link speed
- Secondary asynchronous communication adapter's link speed
- Node number.

You can also use the node command to check the existing link speeds on the primary and secondary asynchronous communication adapters. (The node number can always be seen in the panel headers.) The node command does not force you to change existing values.

> **Note:** There are other support processor parameters that need to be set but cannot be set with the node command. These parameters are set using the switch control console edit switch commands. The switch control console commands can be carried out in switch control console control mode or in a command file. Support processor parameters that are set using the edit switch command are:

- Name
- Date
- Time
- Alarm repeat timer
- Event report destination.

The procedures for setting up these parameters are given in "Setting the Support Processor Name, Date, Time, Alarm Repeat Timer, and Event Report Destination" in Chapter 3.

The Node Command Main Selection Menu

The node command is selected from the Support Processor System Functions panel (Figure 4-4), which is described in Chapter 4.

To display the node command main selection menu:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key ↵ . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 6 into the command area and press the Enter key ↵ . The Node Configuration panel (Figure 12-1) is displayed.

```
PANEL ID:NODECO                    NODE CONFIGURATION
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                   SYSTEM                  MM/DD/YY HH:MM:SS

PLEASE SELECT THE ID OF THE DESIRED COMMAND, THEN PRESS ENTER.

ID        COMMAND       DESCRIPTION

1         PRIASYNCH     SET PRIMARY ASYNCH COMMUNICATIONS ADAPTER PARAMETERS
2         SECASYNCH     SET SECONDARY ASYNCH COMMUNICATIONS ADAPTER PARAMETERS
3         NODENUMBER    SET THIS NODE'S NODE NUMBER (NETWORK ADDRESS)



F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------
 ===>
```

Figure 12-1. Node Configuration Panel

The Node Configuration panel (Figure 12-1) gives you the choices described in the following sections.

Setting the Primary Asynchronous Communication Adapter Link Speed

Selecting PRIASYNCH from the Node Configuration panel (Figure 12-1) allows you to select a link speed for the primary asynchronous communication adapter.

To select a link speed for the primary asynchronous communication adapter:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key ↵ . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 6 into the command area and press the Enter key ↵ . The Node Configuration panel (Figure 12-1) is displayed.

4. Type 1 into the command area and press tne Enter key ↵ . The Node Primary Asynch Adapter panel (Figure 12-2) is displayed.

```
PANEL ID:NODEPR                NODE PRIMARY ASYNCH ADAPTER
LOCAL:XXXXXX(XX) REMOTE:XXXXXX(XX)    CONFIGURATION:X(XXXXXX) NODE:XXXXXX(XX)
USER:XXXXXXXXXXX                SYSTEM                    MM/DD/YY HH:MM:SS

PLEASE ENTER SPEED PARAMETER FOR THE PRIMARY ASYNCHRONOUS ADAPTER.

KEYWORD    CHOICE          DESCRIPTION

SPEED                      LINK SPEED (BITS PER SECOND)

THE CHOICES ARE 4800, 2400, 1200, 600, 300, 150, AND 75.



F1=HELP 3=END 5=PRINTABORT 6=REDISPLAY 10=RETURN
--------------------------------------------------------------------------------
two lines of message area
two lines of message area
--------------------------------------------------------------------------------

===>
```

Figure 12-2. Node Primary Asynch Adapter Panel

The Node Primary Asynch Adapter panel (Figure 12-2) asks you to select a link speed and shows you the possible choices. To select a link speed:

1. Type the selected link speed into the CHOICE column. You must select one of the choices displayed on the panel; the default selection is 2400 bps.

2. Press the Enter key ← . The selected link speed is immediately active. The Node Configuration panel (Figure 12-1) returns.

If you want to just check the link speed, press function key F3 (END) without entering a change. The Node Configuration panel (Figure 12-1) is displayed.

Setting the Secondary Asynchronous Communication Adapter Link Speed

Selecting SECASYNCH from the Node Configuration panel (Figure 12-1) allows you to select a link speed for the secondary asynchronous communication adapter. The selected speed only applies to the Matrix Switch memory dump function, which is not an operator responsibility. 3727 emulation operates at a fixed speed of 2400 bits per second.

To select a link speed for the secondary asynchronous communication adapter:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key ← . The Support Processor System Functions panel (Figure 4-4) is displayed.

3. Type 6 into the command area and press the Enter key ← . The Node Configuration panel (Figure 12-1) is displayed.

4. Type 2 into the command area and press the Enter key ← . The Node Secondary Asynch Adapter panel (Figure 12-3) is displayed.

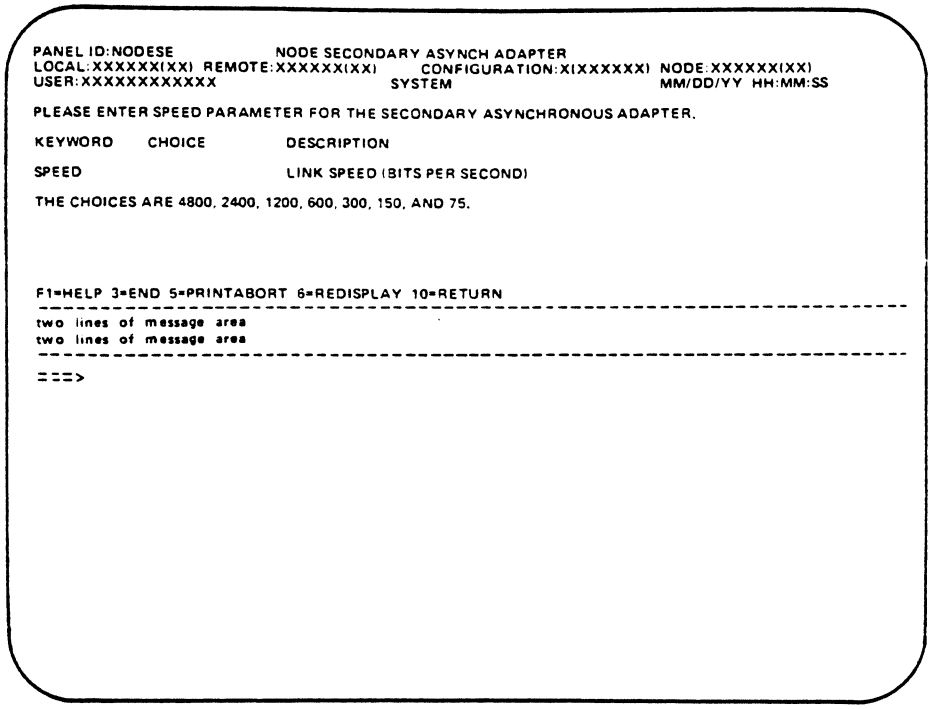


Figure 12-3. Node Secondary Asynch Adapter Panel

The Node Secondary Asynch Adapter panel (Figure 12-3) asks you to select a link speed and shows you the possible choices. To select a link speed:

1. Type the selected link speed into the CHOICE column. You must select one of the choices displayed; the default selection is 2400 bits per second.

2. Press the Enter key ↵ . The selected link speed is immediately active. The Node Configuration panel returns.

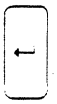
If you want to just check the link speed, press function key F3 (END) without entering a change. The Node Configuration panel (Figure 12-1) is displayed.

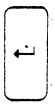
Setting the Support Processor Node Number

Selecting NODE NUMBER from the Node Configuration panel (Figure 12-1) allows you to select a node number for your support processor.

To select a new node number for the support processor:

1. Log on to the support processor. The Operating Mode Selection panel (Figure 4-3) is displayed. If you are already in another panel, press function key F10 (RETURN) as many times as necessary to return you to the Operating Mode Selection panel.

2. Type 2 into the command area and press the Enter key  . The Support Processor System Functions panel (Figure 4-4) is displayed.

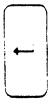
3. Type 6 into the command area and press the Enter key  . The Node Configuration panel (Figure 12-1) is displayed.

4. Type 3 into the command area and press tne Enter key  . The Node Number panel (Figure 12-4) is displayed.

The Node Number panel (Figure 12-4) asks you to select a node number. To select a node number:

1. Type the selected node number into the CHOICE column. The selected node number must be a hexadecimal number of from 01 through 3D. The node number cannot be a node number used anywhere else in the Matrix Switch network.

   CAUTION
   Assigning a new node number causes the support processor to reinitialize all values and automatically logs you off. To cancel your selection, press function key F3 (END). The Node Configuration panel (Figure 12-1) is displayed.

2. Press the Enter key  . The Node Number panel (Figure 12-4) is displayed until software initialization is complete. When initialization is complete, the User Logon panel (Figure 4-2) is displayed. The new node number is displayed in the panel header.

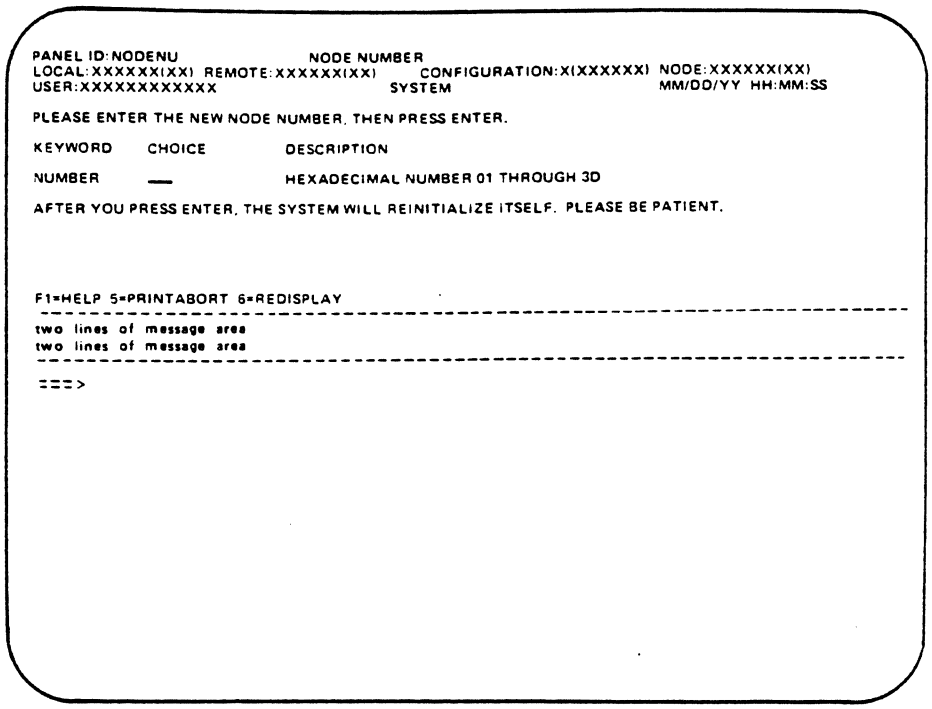


Figure 12-4. Node Number Panel

Chapter 13

General Help

This chapter explains how to get help from the support processor. Help is given to you through help panels, which display information on the various operating topics.

Contents

Help Function Key 13-1
Help from the Operating Mode Selection Panel 13-1
Help from Direct Entry of the Second Level Help Command 13-2

Help Function Key F1

Function key F1 (HELP) is always available once you are logged on. When you press function key F1, the panel displayed is dependent on the panel from which you requested help. The help panel that results from pressing function key F1 contains information specifically about the last operation you were doing. When you exit a panel for help, information entered on that panel is saved.

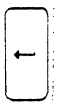
To return to the exited operation, press function key F3 (END). The panel displayed before you requested help is redisplayed.

Help from the Operating Mode Selection Panel

If you select help (5) from the Operating Mode Selection panel (described in Chapter 4), the Help Topic Selection panel (Figure 13-1) is displayed.

The Help Topic Selection panel (Figure 13-1) asks you to choose the name of a help topic. To select a help topic:

1. Type the help **TOPIC** name into the CHOICE column. If you need to see a list of valid help topics, type HELP into the CHOICE column.

2. Press the Enter key  . The selected help topic panel is displayed.

To exit help:

1. Press function key F3 (END). The Help Topic Selection panel (Figure 13-1) is displayed.

2. Press function key F3 (END). The Operating Mode Selection panel (Figure 4-3) is displayed.

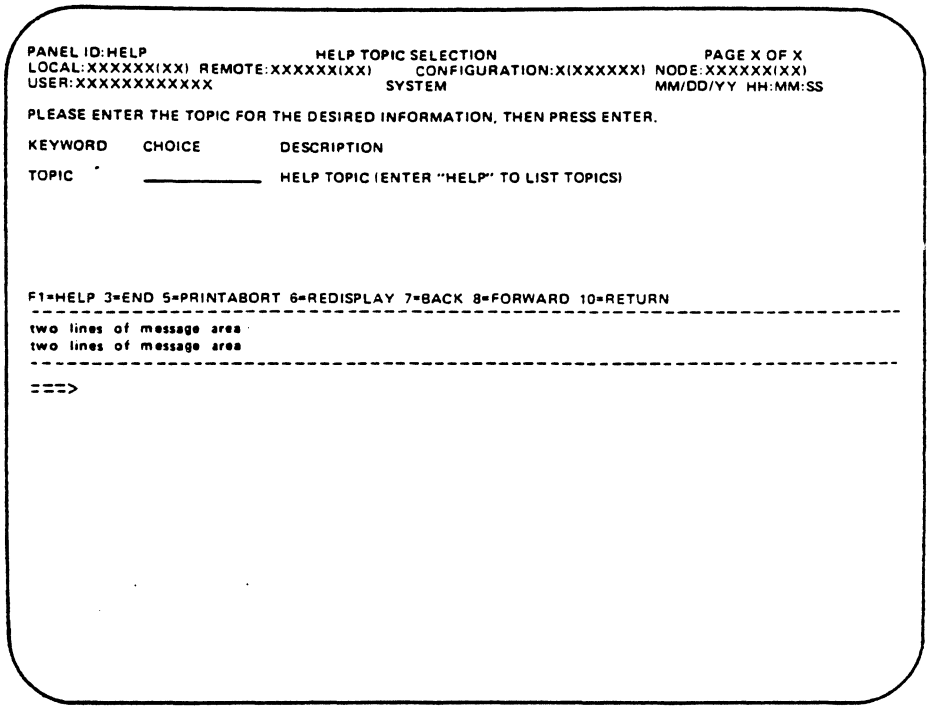


Figure 13-1. Help Topic Selection Panel

Help from Direct Entry of the Second Level Help Command

At any time, typing HELP into the command area and pressing the Enter key ← results in the Help Topic Selection panel (Figure 13-1).

Typing the full form of the help command: HELP TOPIC = *help topic* and pressing the Enter key ← directly accesses the help panel related to your *help topic* selection.

As in the other ways of getting help, pressing function key F3 (END) sends you back to the operation that was exited for help.

Appendices
Abbreviations
Glossary
Index

The appendices list additional information you may need for operating the support processor. This information includes:

- System Messages
- Edit File Error Messages
- Complete Commands and Direct Screen Access IDs
- Command File Examples: Entering 3727 Emulation
- Monitoring 3725 Messages: An Application of the Trigger Command

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Appendix A A-1
Appendix B B-1
Appendix C C-1
Appendix D D-1
Appendix E E-1
Appendix F F-1
List of Abbreviations X-1
Glossary G-1
Index I-1

Appendix A. System Messages

This appendix explains the meaning of the system messages. **Event reports** are covered in Part 1. **Command error messages** are covered in Part 2. For a general discussion of the display, printout format, and acknowledgement of system messages, refer to Chapter 2.

Part 1. Event Reports

Event reports are displayed and printed out in the format

hh:mm:ss Ennn S = swchname(nnn) nn text of message

where ***hh:mm:ss*** is the time the event occurred, ***Ennn*** is the sequence number of the event report; ***S = swchname(nnn)*** indicates which node produced the event report; ***nn*** is the event report number; and ***text of message*** is the message itself.

Event reports are listed in Figure A-1 by event report number.

Event Report No.	Event Report	Meaning	Corrective Action
23	SLP ON-LINE	The printer connected to the Matrix Switch or the support processor is in working order.	
25	NCIC LINK y TO NODE *xxxxxx(xx)* UP	The asynchronous primary or secondary communication link with the node specified by ***XXXXXX(XX)*** is up. y is 0 or 1 and indicates primary or secondary asynchronous communication adapter (ACA). Link 0 is the link connected to the **primary** ACA. Link 1 is the link connected to the **secondary** ACA.	None

Figure A-1. Event Reports (Part 1 of 9)

Event Report No.	Event Report	Meaning	Corrective Action
25 (Cont)	NCIC LINK *y* TO NODE XXXXXX(XX) DOWN, *n*	The asynchronous primary or secondary communication link with the node specified by ***xxxxxx(xx)*** is down. ***y*** is 0 or 1 and indicates primary or secondary asynchronous communication adapter (ACA). LINK 0 is the link connected to the **primary** ACA. Link 1 is the link connected to the **secondary** ACA. ***n*** gives the reason for the downed link. The possible values for ***n*** and their meanings are: ***n*** ***Meaning*** 0 The node specified by ***xxxxxx(xx)*** received a frame where none was expected. 1 A frame was not received by the node specified by ***xxxxxx(xx)*** in more than 2 seconds. 2 The data set ready (DSR) control signal was lost. 3 The node specified by ***xxxxxx(xx)*** recognizes on the network control interface channel an unfamiliar mode name.	Check speed of primary asynchronous communication adapter (with node command) and make sure it matches network control interface I/O panel (on Matrix Switch dip switch setting.
33	SLP OFF-LINE	The printer connected to the Matrix Switch or the support processor is not in working order.	Ensure that the logging printer is turned on and the printer cable is connected.
50	EVENT REPORT DISCARDED	Event queue full.	Empty event queue.
53	TRIGGER RUN DISCARDED	Trigger command file queue full.	None
82	NEW DATE IS *mm/dd/yy*	Occurs at 12:00:00 a.m. Displays new date.	None

Figure A-1. Event Reports (Part 2 of 9)

Event Report No.	Event Report	Meaning	Corrective Action
A0	*fff* FILE *ddd:xxxxxxxxxxxx* COMPLETED	An operation involving a file completed successfully. ***fff*** is the operation that completed successfully. The possible values for ***fff*** and the associated operations are: ***fff*** ***Operation*** EMU Run (to enter emulation) DUM FELSWCH memory dump SRU RUN screen BRU Run batch TRI Trigger run TGR Trigger group TDG Trigger display group TAC Trigger activate TLI Trigger list TDE Trigger delete DIR File directory PRI File print BAC File backup RES File restore DEL File delete REN File rename TRA File transfer FOR File format MOU File mount PPW Protection password PUL Protection user list PUA Protection user access PUD Protection user delete PFI Protection file HEL Help ***ddd*** is the device used in the operation. The possible values for ***ddd*** and the associated devices are: ***ddd*** ***Device*** FIX Fixed disk FLO Floppy diskette ***xxxxxxxxxxxx*** is the name of the file accessed.	None

Figure A-1. Event Reports (Part 3 of 9)

Event Report No.	Event Report	Meaning	Corrective Action
A1	*fff* FILE *ddd:xxxxxxxxxxxx* FAILED OP = *yyy* S = *ssss*	An operation involving a file failed. **ssss** is the code for the cause of the error. The possible values for **ssss** and their meanings are:	See definitions of *ssss* below.
		ssss ***Meaning***	
		0005 Operation inappropriate in this context.	None
		0020 A file with the selected name already exists.	Create a file name that is not already in use.
		0021 The selected file name does not exist.	• Check spelling of file name *xxxxxxxxxxxx*. • Check that file name *xxxxxxxxxxxx* is currently in use. • Check that file name *xxxxxxxxxxxx* is on the selected device *ddd*.
		0026 Access violation.	Perform operations that are authorized for your user name.
		0029 The device or volume is full.	Respond to the appropriate mount message.
		0030 Aborted by user.	None.
		If *ssss* is a different value, report value to the IBM Customer Engineer.	
		fff is the operation that caused the error. The possible values for ***fff*** and their meanings are:	
		fff ***Meaning***	
		EMU Run (to enter emulation) UM FELSWCH memory dump SRU Run screen BRU Run batch TRI Trigger run TGR Trigger group TDG Trigger display group TAC Trigger activate TLI Trigger list TDE Trigger delete DIR File directory PRI File print	

Figure A-1. Event Reports (Part 4 of 9)

Event Report No.	Event Report	Meaning	Corrective Action
A1 (Cont)		***fff*** ***Meaning*** BAC File backup RES File restore DEL File delete REN File rename TRA File transfer FOR File format MOU File mount PPW Protection password PUL Protection user list PUA Protection user access PUD Protection user delete PFI Protection file HEL Help ***ddd*** is the device on which the error occurred. The possible values for ***ddd*** and the associated devices are: ***ddd*** ***Device*** FIX Fixed disk FLO Floppy diskette **xxxxxxxxxxxx** is the name of the file accessed. **yyy** is the operation the microcode was trying to perform when the error occurred. The possible values of **yyy** represent iRMX-88 I/O system calls. These values are assigned in case they are needed; it is possible that some operations present no opportunity for error, and the **yyy** field may not appear in this error message. The possible values for **yyy** and the associated operations are: yyy *Operation* ABT Aborted by user ATT File attach CLO File close CPC Command/parameter check CRE File create DEL File delete	

Figure A-1. Event Reports (Part 5 of 9)

Event Report No.	Event Report	Meaning	Corrective Action
A1 (Cont)		***yyy*** ***Operation***	
		DET File detach	
		FOR Device format	
		GCS Get connection status	
		LAC Logon access check	
		OPE File open	
		REA File read	
		REN File rename	
		SEE File seek	
		TRU File truncate	
		WRI File write	
		XFI Find index entry	
		XGE Get index file	
		XRE Read index entry	
		YAT Attach directory entry	
		YCE Create directory entry	
		YCL Close directory file	
		YDD Delete directory file	
		YDE Delete directory entry	
		YGE Get directory entry	
		YOP Open directory file	
		YUC Update directory create time	
		YUE Update directory early entry time	
		YUL Update directory late entry time	
		YUM Update directory modify access	
		YUN Update directory file name	
		YUP Update directory print/run access	
		YUR Update directory program revision that created the file	
		YUS Update directory file size	
A3	USER *xxxxxxxxxxx* LOGGER ON TO NODE *yyyyyy(yyy)*	A user with user name ***xxxxxxxxxxx***, logged on to the Matrix Switch node specified by ***yyyyyy(yyy)***	None
A4	USER **xxxxxxxxxxx** LOGGER OFF NODE *yyyyyy(yyy)*	A user, with user name **xxxxxxxxxxx**, logged off the Matrix Switch node specified by *yyyyyy(yyy)*.	None

Figure A-1. Event Reports (Part 6 of 9)

Event Report No.	Event Report	Meaning	Corrective Action
A5	MOUNT BLANK DISKETTE FOR BACKUP OPERATION	In a backup operation: • No diskette is in the disk drive. • An unformatted diskette is in the disk drive, or • There is no room for another file on the diskette in the disk drive.	Insert diskette into diskette drive and resume operation by using mount commands.
A6	MOUNT SOURCE DISKETTE FOR RESTORE OPERATION	In a restore operation, no diskette is in the diskette drive.	Insert diskette that contains source file into diskette drive and resume operation by using mount command.
A8	TRIGGER CONDITION *xxxxxxxxxxxx* MATCH FOUND	An event report is received by the support processor that matches the requirements of the trigger condition specified by ***xxxxxxxxxxxx***. This does not mean the trigger condition command file is running; it means the command file is placed on a queue to be run.	None
A9	TRIGGER GROUP *xxxxxxxxxxxx* ALL CONDITIONS MATCHED	All the event reports necessary to match a trigger group, specified by ***xxxxxxxxxxxx***, are received by the support processor. This does not mean the trigger group command file is running; it means the command file is placed on a queue to be run.	None
AA	*xxxx* EXECUTING FILE *yyyyyyyyyyyy*	The command file, specified by ***yyyyyyyyyyyy***, is running.	None
	(*xxxx* is TRIG, SRUN, or BRUN)	**TRIG** indicates a trigger run in progress. **SRUN** indicates a screen run in progress. **BRUN** indicates a batch run in progress.	None

Figure A-1. Event Reports (Part 7 of 9)

Event Report No.	Event Report	Meaning	Corrective Action
AB	*xxxx* EXECUTION OF FILE *yyyyyyyyyyyy* COMPLETED	The run of the command file specified by ***yyyyyyyyyyyy*** completed with no problems.	None
	(*xxxx* is TRIG, SRUN, or BRUN)	**TRIG** indicates a trigger run is completed. **SRUN** indicates a screen run is completed. **BRUN** indicates a batch run is completed.	
AC	*xxxx* ERROR TERMINATION OF FILE *yyyyyyyyyyyy*	The run of the command file specified by ***yyyyyyyyyyyy*** ended because of an error.	Check log file or printer for error message.
	(*xxxx* is TRIG, SRUN, or BRUN)	**TRIG** indicates a trigger run is terminated. **SRUN** indicates a screen run is terminated. **BRUN** indicates a batch run is terminated.	
AF	DEVICE ERROR **du f tttt ss nnnn**	A disk or diskette error is detected. If you get this message, contact the IBM Customer Engineer. **d** is device number. Device number is as follows: Device No. / Device 0 diskette 1 disk **u** is the unit number. Unit number is always 0.	Check that diskette drive is closed and contains an unprotected diskette; if drive is closed and contains an unprotected diskette, contact IBM Customer engineer.

Figure A-1. Event Reports (Part 8 of 9)

Event Report No.	Event Report	Meaning	Corrective Action

f is the function number. Function number assignment is as follows:

Function No.	Function
0	Read
1	Write
2	Seek
3	Format
4	Attach
5	Open
6	Close

tttt is track number.

ss is sector number.

nnnn is hexadecimal status value returned to the application level program, usually by iRMX-88. The values for ***nnnn*** that are known to be returned by iRMX, and their meanings, are:

nnnn	*Meaning*
0001	Timeout
0002	Memory allocated by free space manager is exhausted
0006	File token does not exist
0022	The device and the file driver are not compatible
0023	Unsupported request
0028	File sharing error
002A	Invalid device driver request
002B	I/O error
002D	Illegal volume
002E	Device is offline

Figure A-1. Event Reports (Part 9 of 9)

Part 2. Command Error Messages

Command errors are **displayed on the screen** in the format

nnn text of message

where ***nnn*** is the command error number and ***text of message*** is the message itself.

Command error messages are **printed** in the format

hh:mm:ss C***nnn xxxx*** > ERROR ***nnn text of message***

where ***hh:mm:ss*** is the time the message occurred; C***nnn*** is the number of the command that caused the error; ***xxxx*** is SRUN, BRUN, or TRUN, indicating if the command that caused the error was screen, batch, or trigger run; ***nnn*** is the command error number; and ***text of message*** is the message itself.

Command error messages are listed in Figure A-2 by command error number.

Command Error No.	Command Error	Meaning	Corrective Action
100	COMMAND ACCEPTED	The last-entered command has been checked for syntax and will be executed.	None
101	THE SPECIFIED TRIGGER CONDITION IS ALREADY DEFINED	An attempt is made to define a trigger time, trigger event, or trigger group under the name of an existing trigger condition.	Create a trigger condition name that is not already in use.
102	THE SPECIFIED TRIGGER CONDITION IS NOT DEFINED	An attempt is made to display, activate, or delete a trigger condition that does not exist.	• Check spelling of entry • Check that trigger condition name is in use.
103	TEN TIME-DRIVEN TRIGGER CONDITIONS ALREADY ACTIVE	An attempt is made to define too many time triggers. Ten is the limit.	Delete a time-driven trigger that is no longer needed.
106	INVALID VALUE PARAMETER *xxxxxx* - SEE VALUES ON PANEL	An invalid value is entered for a parameter, specified by ***xxxxxx***, which has its valid values listed on the parameter selection panel.	• Check spelling of entry • Check that entry matches valid entries in description field.

Figure A-2. Command Error Messages (Part 1 of 4)

Command Error No.	Command Error	Meaning	Corrective Action
107	INVALID VALUE FOR PARAMETER *xxxxxx* - PRESS HELP FOR INFO	An invalid entry is made for a parameter, specified by ***xxxxxx***, which does not have its valid values listed on the parameter selection panel.	Press function key F1 (HELP) for more information.
108	PARAMETER *xxxxxx* - MUST BE SUPPLIED	An operation is attempted, and a parameter, specifed by ***xxxxxx***, which must be entered, has not been entered.	Enter a valid parameter in the emphasized field.
109	INVALID CHARACTER *x* IN FIELD *yyyyyy*	An attempt is made to enter a parameter value, specified by ***x***, that contains characters that are not allowed in the field specified by ***yyyyyy***.	Try an alphabetic or numeric character in place of character ***x***.
110	COMMAND SYNTAX ERROR	An entered command cannot be executed because it could not be recognized as an acceptable command.	• Check spelling of entered command • Refer to Appendix C for valid commands.
112	YOUR USER NAME OR PASSWORD WAS REJECTED	An attempt is made to log on using an invalid user name or password. The message purposely does **not** indicate if the incorrect entry was user name or password. This is to make guessing one's way into the system more difficult.	Check spelling of user name and password.
113	THE SELECTED NODE IS NOT A SUPPORT PROCESSOR	An attempt is made to log on remotely to a Matrix Switch node that is: • Not a support processor • Not a valid assigned node number.	Check assignment of selected node number.
114	COMMAND ACCESS VIOLATION	• An entered command violates the user's access rights. • Occurs when the full form of a command is entered in the command prompt area. • Access privileges may be changed by the protection function.	Performs functions authorized under your user name.

Figure A-2. Command Error Messages (Part 2 of 4)

Command Error No.	Command Error	Meaning	Corrective Action
115	THE EMULATOR PORT IS ALREADY IN USE	The 3727 emulator port of the support processor selected for 3727 emulation has been assigned to another user.	Try again later.
116	THE EMULATOR PORT IS NOT ASSIGNED	The EMULATE pseudo command (in a command file run to start 3727 emulation) was not preceded by the ASSIGN pseudo command.	Enter ASSIGN pseudo command in command file.
117	THE EMULATOR DOES NOT RESPOND	A downed network line prevents delivery of data.	• Check that CONSOLE switch on 3725 is set to proper setting (PRIMARY or SECONDARY). • Make sure connection is made through Matrix Switch to selected 3725.
118	EMULATION NODE MUST BE A SUPPORT PROCESSOR	The ASSIGN pseudo command (in a command file run to start 3727 emulation) assigns a node that: • Does not exist or • Is a Matrix Switch.	Check assignment of node number (in command file).
119	THIS FILE DOES NOT EXIST	• A file name is supplied that is not the name of a currently existing file. • Occurs when a currently existing file name is needed.	• Check spelling of file name • Check that file name is currently in use.
120	KEYBOARD BUFFER FULL	A buffer in the keyboard hardware is filled. Should appear rarely, if ever.	Avoid holding down the keys.
121	NO HELP INFORMATION IS AVAILABLE FOR THIS TOPIC	An incorrect help topic name is entered in an attempt to display a help panel.	Check list of valid help topic names by typing into the command area HELP TOPIC = HELP and pressing the Enter key.
122	STAND BY FOR SYSTEM INITIALIZATION	The software is notifying the operator that the re-ipl process is occurring.	Please be patient until the logon panel is redisplayed.
123	UNABLE TO EXECUTE COMMAND - FORMATTING FIXED DISK	An attempt is made to assign the support processor a node number while the fixed disk is being formatted.	Try again later.

Figure A-2. Command Error Messages (Part 3 of 4)

Command Error No.	Command Error	Meaning	Corrective Action
126	100 EVENT-DRIVEN TRIGGER CONDITIONS ALREADY EXIST	An attempt is made to define more than 100 event-driven triggers. Only 100 event-driven triggers can be defined at one time.	Delete an event-driven trigger that is no longer needed.
128	UNABLE TO EXECUTE COMMAND NODE ALREADY EXISTS	An attempt is made to assign the support processor a node number that is already assigned in the system.	Check assignment of node numbers and assign node number that is not already in use.
129	COMMUNICATION WITH THE FILE ACCESS NODE HAS BEEN DISRUPTED	NCI link is lost when user is operating from a remote terminal.	Log off and log on again to the remote node to regain access.
130	PRINTER NOT READY	An attempt is made to print data on the support processor printer when it is powered off or is off-line.	Check that printer is powered up and on-line.
132	INVALID PARAMETER NODE	An invalid node name or number was entered in the node field on the logon panel.	Only enter node names or numbers that have been defined to the NCI network.

Figure A-2. Command Error Messages (Part 4 of 4)

Appendix B. Edit File Error Messages

This appendix explains the meaning of each edit file error message. The edit file error messages are displayed on the screen during an edit file session, and on the Command File Editor panel (Figure 6-2). The edit file error messages are listed in Figure B-1 in alphabetical order.

Edit File Error Message	Meaning
THE CURSOR IS AT THE BEGINNING OF THE FILE. IT CANNOT BE MOVED HIGHER	An attempt is made to move the cursor higher than the first row of the panel.
THE CURSOR IS AT THE BEGINNING OF THE LINE. IT CANNOT BE MOVED LEFT	An attempt is made to move the cursor to the left of the first column of the panel.
THE CURSOR IS AT THE END OF THE FILE. IT CANNOT BE MOVED LOWER	An attempt is made to move the cursor lower than the last row of the panel.
THE CURSOR IS AT THE END OF THE LINE. IT CANNOT BE MOVED RIGHT	An attempt is made to move the cursor to the the right of the 80th column of the panel.
THIS FILE ALREADY EXISTS	• A filename is supplied that is the name of a currently existing file. • Occurs when a new file name is needed.
THIS FILE DOES NOT EXIST	• A file name is supplied that is not the name of a currently existing file. • Occurs when a currently existing file name is needed.
THE FILE HAS REACHED ITS MAXIMUM SIZE	An attempt is made to create a command file that is larger than 32KB characters. The operation is not performed and the edit buffer contents are left as they were before the attempted operation.
THE INSERTED STRING IS TOO LONG FOR THE CURRENT LINE	• An attempt is made to insert a text string that is larger than 79 characters. The insertion is not performed and the edit buffer contents are left as they were before the attempted insertion. • Occurs in insert mode only.
IN THE LAST COLUMN, YOU MAY ONLY MOVE THE CURSOR OR TYPE CARRIAGE RETURN	The cursor is in the last column of the panel and an attempt is made to enter a character into the 80th column of the screen.

Figure B-1. Edit File Error Messages (Part 1 of 2)

Edit File Error Message	Meaning
PARTIAL LINES BEFORE AND AFTER THE HIGHLIGHTED AREA ARE TOO LONG TO BE COMBINED	• A delete attempt is made that would result in a text string that is larger than 79 characters. • Occurs in delete mode only.
THE TEMP BUFFER IS EMPTY. USE DELETE MODE TO PLACE TEXT INTO TEMP BUFFER	• An attempt is made to insert the contents of an empty temporary buffer. • Occurs in insert mode only.
TEXT CANNOT BE FOUND	• An attempt is made to find a text string that cannot be found. • Occurs in find mode only.
YOU MAY NOT RUB OUT PAST THE BEGINNING OF A LINE	An attempt is made to backspace beyond first column of the screen.

Figure B-1. Edit File Error Messages (Part 2 of 2)

Appendix C. Complete Commands and Direct Screen Access IDS

Part 1. Complete Commands

This part lists all the complete commands you can enter directly into the command area and execute. To understand how to use the list, you must be familiar with the following practices.

- The **upper case entries**, numbers, and asterisks (*) given in the list are the actual characters that are part of the commands. Type them as shown.
- The **lowercase entries** tell you the name of the values (such as the time or the name of a file) that are part of the commands. They do not tell you the value itself. You have to know the value beforehand.
- You must leave at least one space where a space is shown.
- Parameter values

  If more than one parameter is given for a parameter keyword, one choice only is acceptable.

  If a parameter has a default value, the parameter and its keyword can be left out of the command. The default value is automatically selected.

  If more than one parameter is needed for a command, the parameters can be typed in any order.

- Abbreviations

  For all entries given in uppercase letters, abbreviations to their first three or more letters are acceptable. For example, SCREEN may be typed as SCR, SCRE, SCREE, or SCREEN.

  All entries given in lowercase letters must be typed as their full value. For example, if a command file name is FILE1, you must type FILE1.

  Number entries cannot be abbreviated.

- Commands are entered on one line.

  For example, an acceptable FILE PRINT command could be:

  FILE PRINT FILENAME = FILE1 DEVICE = FIXED TYPE = LOG OUTPUT = PRINTER and in its abbreviated form: FIL PRI FIL = FILE1 DEV = FIX TYP = LOG OUT = PRI

The list of commands is as follows:

EDIT

EDITFILE FILENAME = command file name

EMULATION (3727)

EMULATION FILENAME = command file name

FILE

FILE BACKUP TYPE = COMMAND,LOG,REPORT,SYSTEM
FILENAME = file name,*

FILE DELETE FILENAME = file name
DEVICE = FIXED,FLOPPY
TYPE = COMMAND,LOG,REPORT

FILE DIRECTORY DEVICE = FIXED,FLOPPY
TYPE = COMMAND,LOG,REPORT
OUTPUT = SCREEN,PRINTER
LIST = BRIEF,FULL

FILE FORMAT DISKETTE

FILE FORMAT FIXED

FILE FORMAT PROGRAM

FILE MOUNT CONTINUE

FILE MOUNT DISMOUNT

FILE MOUNT END

FILE MOUNT FORMAT

FILE PRINT FILENAME = file name
DEVICE = FIXED,FLOPPY
TYPE = COMMAND,LOG,REPORT
OUTPUT = SCREEN,PRINTER

FILE RENAME OLDNAME = file name
NEWNAME = file name
DEVICE = FIXED,FLOPPY
TYPE = COMMAND,REPORT

FILE RESTORE TYPE = COMMAND,LOG,REPORT,PROGRAM,SYSTEM
FILENAME = file name,*

FILE TRANSFER FROMNODE = LOCAL,REMOTE
NAME = file name
NEWNAME = file name
TYPE = COMMAND,REPORT

HELP

HELP TOPIC = help topic

NODE

NODE NODENUMBER NUMBER = node number

NODE PRIASYNCH SPEED = 75,150,300,600,1200,2400,4800

NODE SECASYNCH SPEED = 75,150,300,600,1200,2400,4800

PROTECTION

PROT FILE FILENAME = file name
DEVICE = FIXED,FLOPPY
TYPE = COMMAND,REPORT
PRINTRUN = *,A,B,C,D,E,F,G
MODIFY = *,A,B,C,D,E,F,G

PROT PASSWORD PASSWORD = password

PROT USER ACCESS USERNAME = user name

PROT USER DELETE USERNAME = user name

PROT USER LIST

RUN

RUN BATH FILENAME = command file name

RUN SCREEN FILENAME = command file name

TRIGGER

TRIGGER ACTUATE

TRIGGER DELETE NAME = trigger condition name, group name

TRIGGER DISPGROUP GROUPNAME = group name

TRIGGER EVENT ALARM TCNAME = trigger condition name
FELSWCH = switch name or number,*
PORT = port name or number,*
SIGNAL = signal name,*
ALARM = alarm number,*
FILENAME = command file name

TRIGGER EVENT CARDOFF TCNAME = trigger condition name
FELSWCH = switch name or number,*
CARD = card number,*
FILENAME = command file name

TRIGGER EVENT CARDON TCNAME = trigger condition name
FELSWCH = switch name or number,*
CARD = card number,*
FILENAME = command file name

TRIGGER GROUP GROUPNAME = trigger group name
CMDFILE = command file name

TRIGGER LIST

TRIGGER TIME TCNAME = trigger condition name
DATESTART = date
TIMESTART = time
EXECUTIONS = number of executions,*
INTERNAL = time
FILENAME = command file name

Part 2. Direct Panel Access IDS

This part lists the panel identifications that are used to directly access a panel. All of the panels given in this list can be accessed at any time (subject to defined access privileges). The panel IDs and panel titles can also be found in the header of each panel.

Panel Title	Panel ID
EDIT	
Edit A Command File	EDITFI

Panel Title	Panel ID
FILE	
File Backup Request	FILBAC
File Delete Request	FILDEL
File Directory Request	FILDIR
File (Disk) Format Request	FILFMT
File Mount/Dismount Diskette	FILMOU
File Print Request	FILPRI
File Rename Request	FILREN
File Restore Request	FILRST
File Utilities	FILEUT
Network File Transfer Request	FILXFR
HELP	
General Help	HELP
LOGOFF	
User Logoff Confirmation	LOGOFF
MAIN SELECTIONS	
Operating Mode Selection	MODE
Support Processor System Functions	SYSTEM
NODE	
Node Configuration	NODECO
Node Number	NODENU
Node Primary Asynch Adapter	NODEPR
Node Secondary Asynch Adapter	NODESE
PROTECTION	
Change User Password	PROTPA
Delete A User	PRUSDE
Protect File Function	PROTFI
Protection Function User List	PROTUL
Protection (Security) Control	PROTEC
Protection User Function	PROTUS
Protection User Name Selection	PROTUN
RUN	
Batch Run File Selection	RUNBAT
Run A Command File	RUNFIL
Screen Run File Selection	RUNSCR
3727 EMULATION	
Emulation Setup	MOSS

Panel Title	Panel ID
TRIGGER	
Activate Trigger Group	TRACTV
Card Off-Line Trigger Condition	TRCOFL
Card On-Line Trigger Condition	TRCONL
Define Event-Driven Trigger Condition	TREVNT
Define Time-Driven Trigger Condition	TRTIME
Display Trigger Group Name Selection	TRGRPD
List of Active Trigger Conditions	TRLIST
Trigger Function	TRIG
Trigger Group Name Selection	TRGRPN
Trigger On Alarm Message	TRALRM

Appendix D. Command File Examples: Entering 3727 Emulation

Part 1. Entering Local Emulation

The command file used to enter emulation with the local support processor consists of three parts:

- The switch control console commands that connect the secondary asynchronous communication adapter (secondary ACA) of your support processor to the 3725
- The assign emulator pseudo command
- The emulator 3727 pseudo command.

An example of a command file that could be used to enter 3727 emulation is shown in Figure D-1.

> **Note:** Depending on the setup of your Matrix Switch, the switch control console commands shown in Figure D-1 may not be necessary. Check the *IBM 3728 Communication Control Matrix Switch Operations Guide*, GA27-3643, for more information on these commands.

Command File Entry	Explanation
SEL S = *name or node number of local switch*	Selects local switch as receiver of switch control console commands. The local switch is the switch to which both your support processor and the 3725 are connected. If local switch is already selected (that is, it is identified as NODE in the support processor panel headers), this command is not necessary.
SEL P = *password*	Selects password for Matrix Switch. Allows you to enter program mode.
SEL M = PGM	Selects program mode.
SEL C = *selected configuration*	Selects configuration. This command is not necessary if desired configuration is already selected (as shown in the support processor panel headers).

Figure D-1. Entering 3727 Local Emulation (Part 1 of 2)

Command File Entry	Explanation
RES REC GO	Activates selected configuration. This command is not necessary if selected configuration is already active (as shown in the support processor panel headers).
CON P PA = *x-xx* PB = *x-xx*	Connects the secondary ACA of the support processor to the 3725. Port A is connected to the support processor; port B is connected to the 3725 console cable (or port A is connected to the 3725 and port B is connected to the support processor). If the connection is already set up in the current active configuration, this command is not necessary.
*ASSIGN EMULATOR	Requests the use of your support processor secondary ACA.
*EMULATE 3727	Passes control to the emulation software of your support processor.
[END]	Appears at the end of all command files.

Figure D-1. Entering 3727 Local Emulation (Part 2 of 2)

Part 2. Entering Remote Emulation

The command file used to enter emulation to control a remote 3725 consists of three parts:

- The switch control console commands that connect the secondary asynchronous communication adapter (secondary ACA) of a remote support processor to the remote 3725
- The assign emulator pseudo command
- the emulate 3727 pseudo command.

An example of a command file that could be used to enter remote 3727 emulation is shown in Figure D-2.

> **Note:** Depending on the setup of the remote Matrix Switch, the switch control console commands shown in Figure D-2 may not be necessary. Check the *IBM 3728 Communication Control Matrix Switch Operations Guide*, GA27-3643, for more information on these commands.

Command File Entry	Explanation
SEL S = *name or node number of remote switch*	Selects remote switch as receiver of switch control console commands. The remote switch is the switch to which both a remote support processor and the 3725 connect. If the remote switch is already selected (that is, it is identified as NODE in the support processor panel headers), this command is not necessary.
SEL P = *password*	Selects password for remote Matrix Switch. The password at the remote node is not necessarily the same as the password at the local support processor or the local switch. Allows you to enter program mode.
SEL M = PGM	Selects program mode at remote node.
SEL C = *selected configuration*	Selects configuration. This command is not necessary if desired configuration is already selected (as shown in the support processor panel headers).
RES REC GO	Activates selected configuration. This command is not necessary if selected configuration is already active (as shown in the support processor panel headers).
CON P PA = *x-xx* PB = *x-xx*	Connects the secondary ACA of the remote support processor to the remote 3725. Port A is connected to the support processor; port B is connected to the 3725 console cable (or port A is connected to the 3725 and port B is connected to the support processor). If the connection is already set up in the current active configuration, this command is not necessary.
*ASSIGN EMULATOR *name or node number of remote* ***support processor***	Requests the use of the remote support processor secondary ACA.
*EMULATE 3727	Passes control to the emulation software of the remote support processor.
!END-	Appears at the end of all command files.

Figure D-2. Entering Remote 3727 Emulation

Part 3. Entering Local or Remote Emulation: An Application of Pseudo Commands

This example shows a command file that could be used to enter emulation to control a local or remote 3725. The input pseudo command is included in the command file to show how pseudo commands can be used to increase the number of applications in which command files can be run. In Parts 1 and 2 of this appendix, the command files depicted did not include pseudo commands. As a result, those command files, because they specified exact parameters (selected switch, ports, etc.), could each only be used in one specific application. The input pseudo command allows you to enter parameters *as* the command file is running. In this way, the command file contents can be tailored to the needs of different applications each time the command file is run.

An example of a command file that could be used to enter local or remote 3727 emulation is:

```
*PROMPT "THE SELECTED SWITCH SHOULD BE LOCAL TO THE 3725"

*INPUT [P1] "NODE NUMBER OF MATRIX SWITCH"

*INPUT [P2] "PASSWORD OF SELECTED SWITCH"

*INPUT [P3] "DESIRED ACTIVE CONFIGURATION"

*INPUT [P4] "SELECTED SWITCH UNIT_PORT THAT PC/XT CONNECTS
TO"

*INPUT [P5] "SELECTED UNIT_PORT THAT 3725 CONNECTS TO"

*PROMPT "THE SELECTED PC/XT SHOULD BE LOCAL TO THE 3725"

*INPUT [P6] "NODE NUMBER OF PC/XT"

SEL S = [P1]

SEL P = [P2]

SEL C = [P3]

RES REC GO

CON P PA = [P4] PB = [P5]

*ASSIGN EMULATOR [P6]

*EMULATE 3727

[END]
```

Note: With the exception of INPUT and PROMPT, the reasons for including the commands shown in command file are explained in Parts 1 and 2 of this appendix.

When this command file is selected for running on the Emulation Setup panel (Figure 7-3), you have a choice to enter each of the values requested by the INPUT commands. The values that you enter are substituted in the switch control console commands. The INPUT and PROMPT commands would appear on the screen as:

THE SELECTED SWITCH SHOULD BE LOCAL TO THE 3725

ENTER NODE NUMBER OF MATRIX SWITCH:_____

ENTER PASSWORD OF SELECTED SWITCH: _____

ENTER DESIRED ACTIVE CONFIGURATION: _____

ENTER SELECTED SWITCH UNIT__PORT THAT PC/XT CONNECTS TO:____

ENTER SELECTED SWITCH UNIT__PORT THAT 3725 CONNECTS TO: ____

THE SELECTED PC/XT SHOULD BE LOCAL TO THE 3725

ENTER NODE NUMBER OF PC/XT: _____

When all of these values are entered, the remainder of the command file runs as:

SEL S = *value selected for [P1]*

SEL P = *value selected for [P2]*

SEL C = *value selected for [P3]*

RES REC GO

CON P PA = *value selected for [P4]* PB = *value selected for [P5]*

*ASSIGN EMULATOR *value selected for [P6]*

*EMULATE 3727

[END]

Appendix E. Monitoring 3725 Messages: An Application of the Trigger Command

If your support processor is used to control one or more 3725s, it is possible to set up your support processor to constantly monitor messages produced by all the 3725s, regardless of operating mode (be it system, FELSWCH, or emulation). Setting up your support processor to do this requires three steps:

1. Using the switch control console ALARM command to allow the Matrix Switch to recognize and produce an **event report** when the 3725 sends out a signal that it has a pending message.

2. Creating a **command file** that will be trigger run each time the event report is received by the support processor.

3. Setting up the **trigger condition** that will recognize the event report and trigger the command file.

When a 3725 has a message pending, it raises local loopback (LLB) (on its console cable) to mark. The alarm (set up in step 1) produces an event report each time LLB goes to mark (each time a 3725 has a message pending). The event report is sent to the support processor and matches the trigger condition (set up in step 3). The trigger function triggers the command file (set up in step 2), which is executed. The command file contains the message command, which causes a message to the operator to be displayed. The message says **3725A HAS A MESSAGE PENDING** or something similar.

REMEMBER: The Matrix Switch event report destination is the local support processor (as established in Chapter 3). This process cannot work unless this is true.

This appendix will first describe the three steps to monitoring 3725 messages, and then look at how the operator will monitor 3725 messages in each support processor operating mode.

Setup Procedure

This procedure should be performed once for each 3725 connected to the Matrix Switch. In this way, a unique message can be displayed for each 3725.

Step 1: Alarming the Port

Alarming the port requires the switch control console alarm command.

To set the alarm:

1. Select 3 from the Operating Mode Selection panel (Figure 4-3) and press the Enter key ↵ . The Switch Control Console Command Selection panel (Figure 5-1) is displayed.

2. Enter the following switch control console commands into the command area and press the Enter key ↵ after each entry:

   SEL S = *switch node number*

   SEL P = % *password* (*password* is the password on the Matrix Switch)

   SEL M = PGM

3. Enter the following switch control console alarm command into the command area:

   ALA P PN = xx----xx SAP S0 = LLB T0 = M D0 = 1

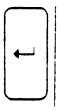
   xx-xx should be the unit and port number (unit_port) to which the 3725 console cable connects. This alarm command sets up an alarm for the LLB signal going to mark for a duration of 1 second. This is alarm number zero for the specified port.

4. Press the Enter key ↵ . Press Ctrl-Csc to leave FELSWCH control.

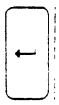
Step 2: Creating the Command File

Creating the command file that runs when the port in step 1 alarms requires the edit file command. To create the command file:

1. Select 2 from the Operating Mode Selection panel (Figure 4-3) and press the Enter key ↵ . The Support Processor System Functions panel (Figure 4-4) is displayed.

2. Select from the Support Processor Systems Functions panel and press the Enter key  . The Edit a Command File panel (Figure 6-1) is displayed.

3. Enter in the CHOICE column a new command file name. A file name can be an alphanumeric text string of 1 to 12 characters. Something like 3725AMSG would be appropriate.

4. Press the Enter key  . The Command File Editor panel (Figure 6-2) is displayed.

5. Create the following command file:

   SEL S = *xx*

   MES T = *text of message*

   [END]

   xx should be the node of your support processor; *text of message* could be any message, of up to 60 characters, that tells an operator:

   - There is a message pending from a 3725
   - Which 3725 has a message pending.

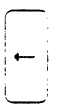
   You might even want to include in the message the name of the command file the operator should use to enter emulation. For example, *text of message* might say:

   3725A HAS MESSAGE PENDING.

   USE COMMAND FILE EMU3727A TO ENTER EMULATION.

   If your message has more than 60 characters, use more than one message command.

   Note: If you have problems with edit file, refer to Chapter 6.

6. Press Function key F1 and then press the Enter key  . The file is saved under the name you entered in step 3.

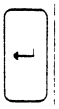
Step 3: Setting Up the Trigger Condition

Setting up the trigger condition that causes the command file to be executed requires the trigger command. To set up the trigger condition:

1. Select 2 from the Operating Mode Selection panel (Figure 4-3) and press the Enter key ↵ . The Support Processor System Functions panel (Figure 4-4) is displayed.
2. Select 2 from the Support Processor System Functions panel and press the Enter key ↵ . The Trigger Function panel (Figure 9-1) is displayed.
3. Select 2 from the Trigger Function panel and press the Enter key ↵ . The screen displays the Event-Driven Trigger Condition panel (Figure 9-3).
4. Select 1 from the Event-Driven Trigger Condition panel and press Enter key ↵ . The screen displays the Trigger On Alarm Message panel (Figure 9-4).
5. Fill in the CHOICE column as follows:

   - For TCNAME enter the same name as the name of the command file you created (the command file with the message command). The TCNAME does not *have* to be the same as the associated command file name. This just provides an easier way of keeping records.
   - For FELSWCH enter the node number of the local Matrix Switch (the switch to which the 3725 connects).
   - For PORT enter the port number to which the 3725 console cable connects. Do not forget to include extension unit number, if extension units are involved.
   - For SIGNAL, enter LLB (the signal that goes to mark when the 3725 has a message pending).

- For ALARM enter 0 (the number of the alarm you set up).
- For FILE NAME enter the name of the command file you created. Be sure to choose the correct file name, otherwise the wrong message will display.

6. Press the Enter key  . The trigger condition is saved under the entered trigger condition name (TCNAME).

REMEMBER: As you go through this procedure for each 3725:

- You must use a unique command file name and trigger condition name for each 3725.
- You should use a unique message for each 3725.

How 3725 Message Monitoring Works in Each Mode

System Mode

When the support processor is operating in system mode, the following sequence of events occur to inform the operator of a pending 3725 message.

1. 3725 raises LLB to mark as an indication of pending message.
2. The raised signal causes an alarm event report which is sent to the support processor, to be produced.
3. The receipt of the event report by the support processor triggers a command file.
4. When the command file runs, a message, telling the operator there is a message pending on a particular 3725, is displayed in the system message area.
5. The operator exits current operation, and enters emulation for the 3725 with the pending message.
6. In emulation, 3725 message is displayed.

FELSWCH Mode

When the support processor is operating in direct FELSWCH control mode, the sequence of events is the same as described in "System Mode," except that in step 4 the message is displayed on a switch control console panel (on the support processor). This is because the support processor automatically sends messages to the Matrix Switch. Once the message is displayed, the operator would exit direct FELSWCH control mode and enter emulation mode for the 3725 with the pending message.

3727 Emulation Mode

If you are in emulation for one 3725, and another 3725 has a message pending, the sequence of events is the same as described in "System Mode," except for step 4. The support processor would inform the operator of its *own* pending message by displaying on the emulation screen the message **MSG 3728**. (The support processor's *own* pending message is the one that says a *3725* has a message pending.) The operator would exit emulation, see that another 3725 has a message pending, and go into emulation to check that 3725.

If you are in emulation for a 3725, and that 3725 has a message, there is no problem because the message will display on the screen. However, the sequence of events as described above will also occur, and with the display of **MSG 3728**, the operator will exit emulation only to learn of a 3725 message already displayed.

Appendix F. Helpful Command Files

This appendix contains a set of command files which allow you to:

- Set date, time, event report destination
- Select a switch node or support processor node
- Select a password
- Name a port
- Connect a port
- Connect a group.

You can perform these operations without having to enter the FELSWCH operating mode. These command files actually prompt you to enter the appropriate information. When completed, the file shows the FELSWCH commands created by you as a result of the prompting.

You must type in these command files (using the support processor editor) and store them in the file utility. When you are ready to perform the above functions, access the file in the Run Screen operation. The file is displayed on the screen (Figures F-1 through F-5), prompting you for information and providing feedback for FELSWCH commands.

```
*PROMPT "THIS COMMAND FILE WILL SETUP THE DATE, TIME AND"
*PROMPT "EVENT REPORT DESTINATION FOR THE SUPPORT PROCESSOR."
*INPUT [P5] "THE SUPPORT PROCESSOR NODE NUMBER"
*INPUT [P6] "THE DATE IN MM/DD/YY FORMAT"
*INPUT [P7] "THE TIME IN HH:MM FORMAT"
*INPUT [P8] "THE NODE NUMBER TO RECEIVE EVENT REPORTS"
SEL S=[P5] M=PGM
EDI S D=[P6] T=[P7]:00 ERD=[P8]
*INPUT [P9] "RETURN TO CONTINUE"
[END]
```

Figure F-1. Command File SETUP

This file prompts you to set the date, time, and event report destination for your support processor.

```
*PROMPT "THIS COMMAND FILE ALLOWS THE USER TO NAME"
*PROMPT "PORTS IN THE SELECTED NODE"
*INPUT [P5] "THE PORT NUMBER"
*INPUT [P6] "THE PORT NAME"
EDI P PN=[P5] NAM=[P6]
*INPUT [P7] "RETURN TO CONTINUE"
[END]
```

Figure F-2. Command File PNAME

This file allows you to name ports.

```
*PROMPT "THIS COMMAND FILE WILL CONNECT PORTS IN THE"
*PROMPT "SELECTED NODE"
*INPUT [P5] "THE FIRST PORT NAME/NUMBER"
*INPUT [P6] "THE PORT TO BE CONNECTED TO (NAME/NUMBER)"
CON P PA=[P5] P8=[P6]
*INPUT [P7] "RETURN TO CONTINUE"
[END]
```

Figure F-3. Command File CONP

This file connects ports in the selected switch.

```
*PROMPT "THIS COMMAND FILE WILL CONNECT GROUPS IN THE"
*PROMPT "SELECTED NODE"
*INPUT [P5] "THE FIRST GROUP NAME"
*INPUT [P6] "THE GROUP NAME TO BE CONNECTED"
CON G GA=[P5] GB=[P6]
*INPUT [P7] "RETURN TO CONTINUE"
[END]
```

Figure F-4. Command File CONG

This file connects groups in the selected switch.

```
*PROMPT "THIS COMMAND FILE SELECTS A NODE FOR THE"
*PROMPT "SCREEN RUN ENVIRONMENT DEFINITION"
*INPUT [P5] "THE NODE TO BE SELECTED"
SEL S=[P5]
*INPUT [P6] "RETURN TO CONTINUE"
[END]
```

Figure F-5. Command File SEL

This file selects the node to be changed or altered by screen run command files.

```
*PROMPT "THIS COMMAND FILE ALLOWS THE PASSWORD OF A 3728"
*PROMPT "TO BE SELECTED FOR SCREEN RUN EXECUTION"
*INPUT [P5] "THE PASSWORD FOR THE NODE:"
SEL P=%[P5] M=PGM
*INPUT [P6] "RETURN TO CONTINUE"
[END]
```

Figure F-6. Command File PWORD

This file selects the password of the previously selected node.

List of Abbreviations

ACA	Asynchronous Communication Adapter
ART	Auto Repeat Timer
CCITT	Comite Consultatif International Telegraph et Telephone (International Telegraph and Telephone Consultative Committee)
DSR	Data Set Ready
EIA	Electronic Industries Association
ERD	Event Report Destination
FELSW	Front-End Line Switch
IML	Initial Microcode Loading
I/O	Input Output
LLB	Local Loopback
MOSS	Maintenance and Operator Subsystem
NCI	Network Control Interface
PC/XT	Personal Computer/XT
RTS	Request To Send
SCC	Switch Control Console
SLP	Switch Logging Printer

Glossary

alphanumeric: Pertaining to a character set that contains letters, digits, and other characters such as punctuation marks.

base unit: The unit number 0 of a multi-unit Matrix Switch. This is the only unit that connects to other nodes, and it coordinates the execution of commands in all units of the multi-unit Matrix Switch.

card number: A hexadecimal number between 0 and E which uniquely identifies a particular port card on a Matrix Switch. If the Matrix Switch has more than one unit, the unit number may be included at the beginning of the card number, with an underscore separating the unit number from the card number (for example, 3_C). If the unit number does not appear, unit 0 is assumed.

communication controller: Used in this book as a generic term for any IBM-supplied equipment that may be controlled by the support processor 3727 emulation function.

configuration: A predefined set of specifications representing group/port names and their connections.

configuration number: One of the three configurations (0, 1, and 2) stored in a Matrix Switch for activation on request. In addition to the numbered configurations, the letter "N" is used to represent the Null configuration (in which no configuration changes will be made by the software) and the letter "A" represents the configuration currently active, which may be 0, 1, 2, or N.

customer engineer: An individual who provides field services for IBM products.

default value: The value automatically assigned by the microcode when a user is asked for a selection but does not provide a selection.

emulation: The imitation of all or part of one computer system by another so that the imitating computer system accepts the same data, executes the same programs, and achieves the same results as the imitated computer system. See 3727 Operators Console emulation.

event report: The system message indicating an occurrence in the system such as cutover to a redundant subsystem, advisory message, or operator command.

extension unit: Any unit in a multi-unit Matrix Switch other than the base unit.

FELSWCH: An abbreviation on some support processor panels that is the same as Matrix Switch stands for front-end line switch.

file name: A name of 1 to 12 alphanumeric characters used to identify a command, report, or log file.

group name: An alphanumeric name of 1 to 9 characters, used to identify a group of ports within a Matrix Switch.

main panel: One of two panels directly beneath the mode panel in the hierarchy. The system panel and the panel displayed when Matrix Switch mode is selected from the mode panel are main panels. A main panel is important because the RETURN PF key causes the main panel for the present subtree to be displayed. It is the starting point for entering a command with full prompting.

Matrix Switch: A device capable of electronically switching signals among a number of ports. A Matrix Switch contains 1 to 16 units.

Matrix Switch network: A collection of Matrix Switches connected by communication links that are used to perform central control at the switches.

mode panel: The panel displayed on the screen immediately after a successful logon.

multi-unit: Pertaining to a Matrix Switch node that contains 2 to 16 units.

network: A group of Matrix Switches, and support processors in the same or different locations, connected together by communication links.

node: A Matrix Switch or support processor in a network; addressable by a single node name or number. A Matrix Switch node may contain multiple units.

node name: An alphanumeric name of 3 to 6 characters, beginning with an alphabetic character; used to identify a particular Matrix Switch or support processor.

node number: A hexadecimal number from 0 to 3F (excluding 3E), which uniquely identifies a particular Matrix Switch or support processor.

Operating Mode Selection panel: The panel displayed on the screen after a successful logon. Provides access to the various operating modes of the support processor. Shown in Figure 4-3.

page: The portion of a panel of information that will fit on the screen at one time.

panel: A collection of information to be displayed on the screen when the dialog is in a particular state. A panel may contain more information than can be displayed on the screen at one time, in which case it is said to have multiple pages.

panel display: The display surface of a display device.

password: A parameter of from 0 to 12 alphanumeric characters that must be entered by the user during logon. A different password can be assigned to each user name. The support processor password may or may not be different from the Matrix Switch password, which is required for entering program mode within FELSWCH control mode.

port: A physical connector on the Matrix Switch.

port card: A printed circuit board supporting multiple ports. Port cards feature drivers and receivers for the communication interface, as well as destination address registers for each port.

port name: An alphanumeric name of 3 to 9 characters, beginning with an alphabetic character, used to identify a particular port that can be switched.

port number: A hexadecimal number between 0 and F which uniquely identifies a particular port on a Matrix Switch. If the Matrix Switch has more than one unit, the unit number must be included at the beginning of the port number, with an underscore separating the unit number from the port number (for example, 3_21). If the unit number does not appear, unit 0 (the base unit) is assumed.

primary asynchronous communication adapter (primary ACA): A type of adapter used to connect the support processor to the network control interface port on a Matrix Switch. Provides a control interface between the support processor and the Matrix Switch network.

remote support processor: Any support processor in the Matrix Switch network other than the local support processor.

screen: A physical CRT display device. It is different from the information displayed on it, which is called a panel.

secondary asynchronous communciation adapter (secondary ACA): A type of adapter used to connect the support processor to a communication controller for 3727 emulation.

signal name: Mnemonics of two or three letters used to identify the individual signals switched by a Matrix Switch.

support processor: An intelligent controller (personal computer/XT) that provides enhanced capabilities to manage a network of Matrix Switches.

support processor printer: An IBM 5182 personal computer color printer used only with a support processor to provide printed copy of support processor operations and event reports.

switch: A cabinet or cabinet's circuit cards and power supplies physically connected together in one location. Consoles and printers connect to the switch, and control and monitor switch operation.

switch control console: An asynchronous IBM 3161 ASCII Display Station used to control the Matrix Switch.

switch logging printer: An IBM 4201 Proprinter (with a serial adapter card) serving as a logging device. Prints hard copies that chronicle all switch activity.

switch name: A 3 to 6 character mnemonic that identifies a unique switch site. No two switch sites may share the same switch name.

TCNAME: See ***trigger condition name***.

telecommunication: Communication by telegraph or telephone.

telecommunication network: A collection of telecommunication equipment (such as modems and communication controllers) connected to a Matrix Switch network.

3727 emulation: The operating mode in which the support processor emulates on IBM 3727 Operators Console and controls an IBM 3725 Communication Controller.

trigger condition name: An alphanumeric name of 1 to 12 characters that identifies a particular active trigger condition.

unit: One unit of a Matrix Switch, contained in a single physical rack. A single unit is the smallest entity capable of providing switching functions.

unit number: A hexadecimal number between 0 and F which identifies one unit of a multi-unit configuration.

user name: A name of 1 to 12 alphanumeric characters used to log on to the support processor.

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GA27-3644-0

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IBM 3728 Communication Control Matrix Switch Installation Instructions

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